

Submission No. 17-167 August 31, 2017

Mr. Christopher J. Kirkpatrick Secretary of the Commission Office of the Secretariat Commodity Futures Trading Commission Three Lafayette Centre 1155 21<sup>st</sup> Street, NW Washington, DC 20581

Re: Two Year Mid-Curve Options on New Jersey Solar Renewable Energy Certificate Future and Related Amendments (15 of 20)
Submission Pursuant to Section 5c(c)(1) of the Act and Regulation 40.2 and 40.6(a)

Dear Mr. Kirkpatrick:

Pursuant to Commission Regulations 40.2 and 40.6(a), ICE Futures U.S., Inc. ("Exchange") submits, by written certification, new Rules 18.D.032 through 18.D.045 and 18.E.085 through 18.E.090, and amendments to Resolutions 1 and 2 of Chapter 18, and the Exchange's Block Trade Procedures, which are codified in the Exchange's Block Trade FAQ, as set forth in Exhibit A. Additionally, the Exchange is amending its No Cancellation Range ("NCR") to align with current naming conventions. The new rules and amendments provide for 14 new environmental futures contracts and six new environmental options contracts, which will be listed on September 18, 2017.

### Massachusetts Solar Renewable Energy Certificate Carve Out I Future

The Massachusetts Solar Renewable Energy Certificate Carve Out I Future ("Massachusetts SREC I") contracts are physically-delivered environmental futures contracts. The deliverable instruments for these contracts are SRECs representing solar renewable energy eligible to meet the SREC I requirement of the Massachusetts Renewable Energy Portfolio Standard. They must also have a vintage year designation that corresponds to the specified vintage of the expiring contract. The specifications for the new contract are set forth in the table below:

| Contract Name                                                                | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>1</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|------------------------------------------------------------------------------|------------------|------------------|------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| Massachusetts<br>Solar Renewable<br>Energy Certificate<br>Carve Out I Future | MSF              | 10 MWh           | \$0.01                       | \$30.00       | 3                                  | 5                               | 5.00 | 10                       | 18,000                             |

The standard listing cycle for the Massachusetts SREC I is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 10 lots is consistent with the minimum size requirements for existing vintages. A Deliverable Supply Analysis detailing the Exchange's methodology

<sup>&</sup>lt;sup>1</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

for determining the spot month position limit for the Massachusetts SREC I contract is attached hereto as Exhibit B.

## Massachusetts Solar Renewable Energy Certificate Carve Out II Future

The Massachusetts Solar Renewable Energy Certificate Carve Out II Future ("Massachusetts SREC II") contracts are physically-delivered environmental futures contracts. The deliverable instruments for these contracts are SRECs representing solar renewable energy eligible to meet the SREC II requirement of Massachusetts Renewable Energy Portfolio Standard. They must also have a vintage year designation that corresponds to the specified vintage of the expiring contract. The specifications for the new contract are set forth in the table below:

| Contract Name                                                                    | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>2</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|----------------------------------------------------------------------------------|------------------|------------------|------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| Massachusetts<br>Solar Renewable<br>Energy Certificate<br>Carve Out II<br>Future | MS2              | 10 MWh           | \$0.01                       | \$30.00       | 3                                  | 5                               | 5.00 | 10                       | 6,250                              |

The standard listing cycle for the Massachusetts SREC II is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 10 lots is consistent with minimum size requirements for comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis detailing the Exchange's methodology for determining the spot month position limit for the Massachusetts SREC II contract is attached hereto as Exhibit B.

### **New Jersey Compliance Renewable Energy Certificate Class I Future**

The New Jersey Compliance Renewable Energy Certificate Class I Future ("NJ REC") contracts are physically-delivered environmental futures contracts. The deliverable instruments for these contracts are RECs representing Class I renewable energy eligible to meet the requirement of the New Jersey Renewable Energy Portfolio Standard. They must also have a vintage year designation that corresponds to the specified vintage of the expiring contract. The specifications for the new contract are set forth in the table below:

| Contract Name                                                                 | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>3</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|-------------------------------------------------------------------------------|------------------|------------------|------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| New Jersey<br>Compliance<br>Renewable<br>Energy Certificate<br>Class I Future | NJN              | 100 MWh          | \$0.01                       | \$2.50        | 3                                  | 5                               | 0.25 | 50                       | 47,500                             |

The standard listing cycle for the NJ REC is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 50 lots is consistent with the minimum size requirements for

<sup>&</sup>lt;sup>2</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

<sup>&</sup>lt;sup>3</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis detailing the Exchange's methodology for determining the spot month position limit for the NJ REC contract is attached hereto as Exhibit B.

### Maryland Compliance Renewable Energy Credit Tier 1 Future

The Maryland Compliance Renewable Energy Credit Tier 1 Future ("Maryland REC") contracts are physically-delivered environmental futures contracts. The deliverable instruments for these contracts are RECs that are eligible to meet Maryland's Tier 1 renewable energy requirement. They must also have a vintage year designation that corresponds to the specified vintage of the expiring contract. The specifications for the new contract are set forth in the table below:

| Contract Name                                                         | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>4</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|-----------------------------------------------------------------------|------------------|------------------|------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| Maryland<br>Compliance<br>Renewable<br>Energy Credit<br>Tier 1 Future | MDE              | 100 MWh          | \$0.01                       | \$2.50        | 3                                  | 5                               | 0.25 | 50                       | 62,500                             |

The standard listing cycle for the Maryland REC is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 50 lots is consistent with minimum size requirements for comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis detailing the Exchange's methodology for determining the spot month position limit for the Maryland REC contract is attached hereto as Exhibit B.

### Pennsylvania Compliance Alternative Energy Credit Tier I Future

The Pennsylvania Compliance Alternative Energy Credit Tier I Future ("Pennsylvania AEC") contracts are physically-delivered environmental futures contracts. The deliverable instruments for these contracts are AECs that are eligible to meet Pennsylvania's Tier I renewable energy requirement. They must also have a vintage year designation that corresponds to the specified vintage of the expiring contract. The specifications for the new contract are set forth in the table below:

| Contract Name                                                               | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>5</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|-----------------------------------------------------------------------------|------------------|------------------|------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| Pennsylvania<br>Compliance<br>Alternative<br>Energy Credit Tier<br>I Future | PAR              | 100 MWh          | \$0.01                       | \$2.50        | 3                                  | 5                               | 0.25 | 50                       | 57,500                             |

The standard listing cycle for the Pennsylvania AEC is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 50 lots is consistent with minimum size requirements for comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis

<sup>&</sup>lt;sup>4</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

<sup>&</sup>lt;sup>5</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

detailing the Exchange's methodology for determining the spot month position limit for the Pennsylvania AEC contract is attached hereto as Exhibit B.

### **Maryland Solar Renewable Energy Credit Future**

The Maryland Solar Renewable Energy Credit Future ("Maryland SREC") contracts are physically-delivered environmental futures contracts. The deliverable instruments for the Maryland SREC contracts are SRECs that represent solar photovoltaic sources eligible to meet the Solar Carve Out requirement of the Maryland Renewable Energy Portfolio Standard. They must also have a vintage year designation that corresponds to the specified vintage of the expiring contract. The specifications for the new contract are set forth in the table below:

| Contract Name                                          | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>6</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|--------------------------------------------------------|------------------|------------------|------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| Maryland Solar<br>Renewable<br>Energy Credit<br>Future | MDX              | 10 MWh           | \$0.01                       | \$10.00       | 3                                  | 5                               | 5.00 | 10                       | 12,000                             |

The standard listing cycle for the Maryland SREC is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 10 lots is consistent with minimum size requirements for comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis detailing the Exchange's methodology for determining the spot month position limit for the Maryland SREC contract is attached hereto as Exhibit B.

### Pennsylvania Solar Alternative Energy Credit Future

The Pennsylvania Solar Alternative Energy Credit Future ("Pennsylvania SAEC") contracts are physically-delivered environmental futures contracts. The deliverable instruments for these contracts are SAECs that represent solar photovoltaic sources eligible to meet Pennsylvania's Tier I Alternative Energy Credit requirement. They must also have a vintage year designation that corresponds to the specified vintage of the expiring contract. The specifications for the new contract are set forth in the table below:

| Contract Name                                                | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>7</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|--------------------------------------------------------------|------------------|------------------|------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| Pennsylvania<br>Solar Alternative<br>Energy Credit<br>Future | PAX              | 10 MWh           | \$0.01                       | \$10.00       | 3                                  | 5                               | 5.00 | 10                       | 24,000                             |

The standard listing cycle for the Pennsylvania SAEC is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 10 lots is consistent with minimum size requirements for comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis detailing the Exchange's methodology for determining the spot month position limit for the Pennsylvania SAEC contract is attached hereto as Exhibit B.

<sup>&</sup>lt;sup>6</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

<sup>&</sup>lt;sup>7</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

### **Connecticut Compliance Renewable Energy Certificate Class I Future**

The Connecticut Compliance Renewable Energy Certificate Class I Future ("Connecticut REC") contracts are physically-delivered environmental futures contracts. The deliverable instruments for these contracts are RECs that are eligible to meet the Class I requirement of the Connecticut Renewable Energy Portfolio Standard. They must also have a vintage year designation that corresponds to the specified vintage of the expiring contract. The specifications for the new contract are set forth in the table below:

| Contract Name                                                      | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>8</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|--------------------------------------------------------------------|------------------|------------------|------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| Connecticut Compliance Renewable Energy Certificate Class I Future | СТТ              | 100 MWh          | \$0.01                       | \$10.00       | 3                                  | 5                               | 1.00 | 50                       | 17,500                             |

The standard listing cycle for the Connecticut REC is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 50 lots is consistent with minimum size requirements for comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis detailing the Exchange's methodology for determining the spot month position limit for the Connecticut REC contract is attached hereto as Exhibit B.

### Massachusetts Compliance Renewable Energy Certificate Class I Future

The Massachusetts Compliance Renewable Energy Certificate Class I Future ("Massachusetts REC") contracts are physically-delivered environmental futures contracts. The deliverable instruments for these contracts are RECs that are eligible to meet the Class I requirement of the Massachusetts Renewable Energy Portfolio Standard. They must also have a vintage year designation that corresponds to the specified vintage of the expiring contract. The specifications for the new contract are set forth in the table below:

| Contract Name                                                                    | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>9</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|----------------------------------------------------------------------------------|------------------|------------------|------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| Massachusetts<br>Compliance<br>Renewable Energy<br>Certificate Class I<br>Future | MCL              | 100 MWh          | \$0.01                       | \$10.00       | 3                                  | 5                               | 1.00 | 50                       | 15,000                             |

The standard listing cycle for the Massachusetts REC is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 50 lots is consistent with minimum size requirements for comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis detailing the Exchange's methodology for determining the spot month position limit for the Massachusetts REC contract is attached hereto as Exhibit B.

<sup>&</sup>lt;sup>8</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

<sup>&</sup>lt;sup>9</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

### NEPOOL Dual Qualified Compliance Renewable Energy Certificate Class I Future

The NEPOOL Dual Qualified Compliance Renewable Energy Certificate Class I Future ("NEPOOL Dual Qualified REC") contracts are physically-delivered environmental futures contracts. The deliverable instruments for these contracts are RECs that simultaneously qualify in Massachusetts and Connecticut, pursuant to the standards noted above. The specifications for the new contract are set forth in the table below:

| Contract Name                                                                | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>10</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|------------------------------------------------------------------------------|------------------|------------------|-------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| NEPOOL Dual Qualified Compliance Renewable Energy Certificate Class I Future | NER              | 100 MWh          | \$0.01                        | \$10.00       | 3                                  | 5                               | 1.00 | 50                       | 15,000                             |

The standard listing cycle for the NEPOOL Dual Qualified REC is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 50 lots is consistent with minimum size requirements for comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis detailing the Exchange's methodology for determining the spot month position limit for the NEPOOL Dual Qualified REC contract is attached hereto as Exhibit B.

### **New Jersey Solar Renewable Energy Certificate Futures & Options**

The Exchange is listing two New Jersey Solar Renewable Energy Certificate ("NJ SREC") futures contracts and three new NJ SREC options contracts. The deliverable instruments for both the NJ SREC Future and the NJ SREC Prior Year Future are SRECs that are eligible to meet the requirements of the New Jersey Renewable Energy Portfolio Standard. They must also have a vintage year designation that corresponds to the specified vintage of the expiring contract. With respect to the options contracts, for the Option on New Jersey Solar Renewable Energy Certificate Future, one lot of options will exercise into one lot of futures with the corresponding strip upon expiry. Upon expiry of the One Year Mid-Curve Option on New Jersey Solar Renewable Energy Certificate Future, however, one lot of options will exercise into one lot of futures with a strip that is one year later. Similarly, upon expiry of the Two Year Mid-Curve Option on New Jersey Solar Renewable Energy Certificate Future, one lot of options will exercise into one lot of futures with a strip that is two years later. Specifications for the new contracts are set forth in the table below:

| Contract Name                                                            | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>11</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|--------------------------------------------------------------------------|------------------|------------------|-------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| New Jersey Solar<br>Renewable<br>Energy Certificate<br>Prior Year Future | NPR              | 10 MWh           | \$0.01                        | \$30.00       | 3                                  | 5                               | 5.00 | 10                       | 45,000                             |
| New Jersey Solar<br>Renewable<br>Energy Certificate                      | NPS              | 10 MWh           | \$0.01                        | \$30.00       | 3                                  | 5                               | 5.00 | 10                       | 45,000                             |

<sup>&</sup>lt;sup>10</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

<sup>&</sup>lt;sup>11</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

| Future                                                                                             |     |        |        |     |     |     |                                        |    |        |
|----------------------------------------------------------------------------------------------------|-----|--------|--------|-----|-----|-----|----------------------------------------|----|--------|
| Option on New<br>Jersey Solar<br>Renewable<br>Energy Certificate<br>Future                         | NPS | 10 MWh | \$0.01 | n/a | n/a | n/a | 20% of<br>Premium<br>FMV up<br>to 5.00 | 10 | 45,000 |
| One Year Mid-<br>Curve Option on<br>New Jersey Solar<br>Renewable<br>Energy Certificate<br>Future  | NPP | 10 MWh | \$0.01 | n/a | n/a | n/a | 20% of<br>Premium<br>FMV up<br>to 5.00 | 10 | 45,000 |
| Two Year Mid-<br>Curve Options on<br>New Jersey Solar<br>Renewable<br>Energy Certificate<br>Future | NPQ | 10 MWh | \$0.01 | n/a | n/a | n/a | 20% of<br>Premium<br>FMV up<br>to 5.00 | 10 | 45,000 |

The standard listing cycle for the NJ SREC futures and options is monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 10 lots is consistent with minimum size requirements for comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis detailing the Exchange's methodology for determining the spot month position limit for the NJ SREC futures contracts is attached hereto as Exhibit B. NJ SREC options are subject to the position limit and accountability levels of their underlying futures contracts.

# PJM Tri Qualified Renewable Energy Certificate Class I Futures & Options

The Exchange is listing two new PJM Tri Qualified Renewable Energy Certificate Class I ("PJM Tri Qualified REC") futures contracts and three new PJM Tri Qualified REC options contracts. The deliverable instruments for the PJM Tri Qualified REC futures are RECs that are eligible to meet the Class I or Tier 1/I requirements in each of the states of Pennsylvania, New Jersey and Maryland. Further, the RECs must have a vintage year designation that corresponds to the specified vintage year of the expiring contract. Applicable to the Maryland vintage-year designation only—and only for the expiry months of January through July—sellers have the option to deliver a vintage designation that corresponds to the specified vintage year of the expiring contract or one that is one year earlier. With respect to the Option on PJM Tri Qualified Renewable Energy Certificate Class I Future, one lot of options will exercise into one lot of futures with the corresponding strip. Upon expiry of the One Year Mid-Curve Option on PJM Tri Qualified Renewable Energy Certificates Class I Future, however, one lot of options will exercise into one lot of futures with a strip that is one year later. Similarly, upon expiry of the Two Year Mid-Curve Option on PJM Tri Qualified Renewable Energy Certificates Class I Future, one lot of options will exercise into one lot of futures with a strip that is two years later. Specifications for the new contracts are set forth in the table below:

| Contract<br>Name                                                            | Contract<br>Code | Contract<br>Size | Minimum<br>Tick <sup>12</sup> | IPL<br>Amount | IPL<br>Recalc<br>Time<br>(Seconds) | IPL Hold<br>Period<br>(Seconds) | NCR  | Minimum<br>Block<br>Size | Spot<br>Month<br>Position<br>Limit |
|-----------------------------------------------------------------------------|------------------|------------------|-------------------------------|---------------|------------------------------------|---------------------------------|------|--------------------------|------------------------------------|
| PJM Tri<br>Qualified<br>Renewable<br>Energy<br>Certificate<br>Class I Prior | PPY              | 100 MWh          | \$0.01                        | \$2.50        | 3                                  | 5                               | 0.25 | 50                       | 42,500                             |

<sup>&</sup>lt;sup>12</sup> The minimum price fluctuation is \$0.01 for both screen and block trades.

| Year Future                                                                                                       |     |         |        |        |     |     |                                        |    |        |
|-------------------------------------------------------------------------------------------------------------------|-----|---------|--------|--------|-----|-----|----------------------------------------|----|--------|
| PJM Tri<br>Qualified<br>Renewable<br>Energy<br>Certificate<br>Class I Future                                      | PPR | 100 MWh | \$0.01 | \$2.50 | 3   | 5   | 0.25                                   | 50 | 42,500 |
| Option on PJM Tri Qualified Renewable Energy Certificate Class I Future                                           | PPR | 100 MWh | \$0.01 | n/a    | n/a | n/a | 20% of<br>Premium<br>FMV up<br>to 0.25 | 50 | 42,500 |
| One Year Mid-<br>Curve Option<br>on PJM Tri<br>Qualified<br>Renewable<br>Energy<br>Certificates<br>Class I Future | PPS | 100 MWh | \$0.01 | n/a    | n/a | n/a | 20% of<br>Premium<br>FMV up<br>to 0.25 | 50 | 42,500 |
| Two Year Mid-<br>Curve Option<br>on PJM Tri<br>Qualified<br>Renewable<br>Energy<br>Certificates<br>Class I Future | PPT | 100 MWh | \$0.01 | n/a    | n/a | n/a | 20% of<br>Premium<br>FMV up<br>to 0.25 | 50 | 42,500 |

The standard listing cycles for the PJM Tri Qualified REC futures and options are monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years. The Standard Cycle is January, February, March, April, May, June, July, August, September, October, November and December. The block trade minimum of 50 lots is consistent with minimum size requirements for comparable contracts currently listed by the Exchange. A Deliverable Supply Analysis detailing the Exchange's methodology for determining the spot month position limit for the PJM Tri Qualified REC futures contracts is attached hereto as Exhibit B. The PJM Tri Qualified REC options are subject to the position limit and accountability levels of their underlying futures contracts.

### Relationship between New Contracts and Existing Vintage-Specific Contracts

The Exchange's "Vintage Year" corresponds to the year of generation for a given certificate and differs slightly from the Reporting Year or Energy Year established by the various renewable energy programs, upon which the futures contracts are based. Using the New Jersey SREC program as an example, *Reporting Year* 2017 represents certificates generated between June 2016 and May 2017. However, there is a delay between when certificates are generated, minted, and become available for physical delivery. Further, although August is organically the first available physical delivery month of a new Energy Year for New Jersey SRECs, the Exchange gives market participants an additional month to true up and close out of their inventory. As such, the Exchange's *Vintage Year* is offset by three months. Consequently, Vintage Year 2017 for the New Jersey SREC contracts is September 2016 through August 2017. A table denoting each of the Vintage Year periods for the above contracts is provided in Exhibit A.

Further, as noted above, the Exchange historically listed a unique futures contract for each Vintage Year going out the curve several years (i.e, vintage-specific contracts). However, with the new contracts, the Exchange will simply list a non-vintage-specific contract for each of the above programs, with each listed contract month corresponding to the Vintage Year in which it resides. For example, an August 2017 New Jersey Solar Renewable Energy Certificate Future ("Aug17 NPS") contract will be for

Vintage Year 2017. The September 2017 NPS contract, however, will be for Vintage Year 2018. Further, the futures and options contracts traded on the Exchange will denote both the contract month as well as the Vintage Year for the avoidance of doubt. Finally, positions in each of the existing vintage-specific contracts will be aggregated into the corresponding strip of the new contracts for purposes of position limit monitoring and will be subject to the new contract's spot month position limit and accountability levels, as set forth in Exhibit A.

### **Certifications**

The new rule amendments will become effective with the listing of the new physical environmental contracts on September 18, 2017. The Exchange is not aware of any substantive opposing views to the new physical environmental contracts. The Exchange certifies that the rule amendments comply with the requirements of the Act and the rules and regulations promulgated thereunder. The Exchange has reviewed the designated contract market core principles ("Core Principles") as set forth in the Act and has determined that the listing of the contracts complies with the following relevant Core Principles:

#### COMPLIANCE WITH RULES

The terms and conditions of the new physical environmental contracts are set forth in new Rules 18.D.032 through 18.D.045 and 18.E.085 through 18.E.093, and amendments to Resolutions 1 and 2 of Chapter 18, and the Exchange's Block Trade Procedures, and will be enforced by the Exchange. In addition, trading of the contracts is subject to all relevant Exchange rules which are enforced by the Market Regulation Department.

### CONTRACTS NOT READILY SUBJECT TO MANIPULATION

The new physical environmental futures contracts are not readily subject to manipulation as they are based on established and liquid underlying cash markets. In addition, trading of the new contracts will be monitored by the Market Regulation Department.

#### POSITION LIMITS OR ACCOUNTABILITY

Positions in the new physical environmental futures and options contracts will be subject to position limits set by the Exchange. As described above, such position limits are based upon existing levels set for substantially similar products or are based upon the deliverable supply in the cash market. Positions in the options will be aggregated with the underlying futures contracts and subject to the position limits currently in place for the underlying futures contracts.

### FINANCIAL INTEGRITY OF CONTRACTS

The new physical environmental contracts will be cleared by ICE Clear Europe, a registered derivatives clearing organization subject to Commission regulation, and carried by registered futures commission merchants qualified to handle customer business.

The Exchange further certifies that, concurrent with this filing, a copy of this submission was posted on the Exchange's website and may be accessed at (<a href="https://www.theice.com/futures-us/regulation#rule-filings">https://www.theice.com/futures-us/regulation#rule-filings</a>).

If you have any questions or need further information, please contact me at 312-836-6746 or at conor.weber@theice.com.

Sincerely,

Con When

Conor Weber Compliance Counsel Market Regulation

Enc.

Division of Market Oversight New York Regional Office cc:

# **EXHIBIT A**

# Vintage Year Designations for Physical Environmental Futures and Options Contracts

| Contract                                                              | Vintage Year 2017            |
|-----------------------------------------------------------------------|------------------------------|
| PJM GATS                                                              |                              |
| New Jersey Compliance Renewable Energy Certificate Class I            | September 2016 – August 2017 |
| Maryland Compliance Renewable Energy Credit Tier 1                    | September 2016 – August 2017 |
| Pennsylvania Compliance Alternative Energy Credit Tier I              | September 2016 – August 2017 |
| Pennsylvania Solar Alternative Energy Credit                          | September 2016 – August 2017 |
| New Jersey Solar Renewable Energy Certificate                         | September 2016 – August 2017 |
| PJM Tri Qualified Renewable Energy Certificate Class I                | September 2016 – August 2017 |
| Maryland Solar Renewable Energy Credit                                | April 2016 – March 2017      |
| NEPOOL GIS                                                            |                              |
| Massachusetts Solar Renewable Energy Certificate Carve Out I          | July 2017-May 2018           |
| Massachusetts Solar Renewable Energy Certificate Carve Out II         | July 2017-May 2018           |
| Connecticut Compliance Renewable Energy Certificate Class I           | July 2017-May 2018           |
| Massachusetts Compliance Renewable Energy Certificate Class I         | July 2017-May 2018           |
| NEPOOL Dual Qualified Compliance Renewable Energy Certificate Class I | July 2017-May 2018           |

## **Resolution No. 1-Minimum Price Fluctuation Table**

The following minimum price fluctuations shall be applicable to Energy Contracts.

Rule Product Minimum Price Fluctuation
Number Screen Blocks and
other trades
outside the
central limit
order book

\* \* \*

| 18.D.032 | Massachusetts Solar Renewable Energy Certificate Carve Out I Future             | \$0.01 | \$0.01 |
|----------|---------------------------------------------------------------------------------|--------|--------|
|          | Massachusetts Solar Renewable Energy Certificate Carve Out II                   |        |        |
| 18.D.033 | Future                                                                          | \$0.01 | \$0.01 |
| 18.D.034 | New Jersey Compliance Renewable Energy Certificate Class I Future               | \$0.01 | \$0.01 |
| 18.D.035 | Maryland Compliance Renewable Energy Credit Tier 1 Future                       | \$0.01 | \$0.01 |
| 18.D.036 | Pennsylvania Compliance Alternative Energy Credit Tier I Future                 | \$0.01 | \$0.01 |
| 18.D.037 | Maryland Solar Renewable Energy Credit Future                                   | \$0.01 | \$0.01 |
| 18.D.038 | Pennsylvania Solar Alternative Energy Credit Future                             | \$0.01 | \$0.01 |
| 18.D.039 | Connecticut Compliance Renewable Energy Certificate Class I Future              | \$0.01 | \$0.01 |
| 18.D.040 | Massachusetts Compliance Renewable Energy Certificate Class I<br>Future         | \$0.01 | \$0.01 |
| 18.D.040 |                                                                                 | \$0.01 | \$0.01 |
| 18.D.041 | NEPOOL Dual Qualified Compliance Renewable Energy Certificate<br>Class I Future | \$0.01 | \$0.01 |
| 18.D.042 | New Jersey Solar Renewable Energy Certificate Prior Year Future                 | \$0.01 | \$0.01 |
| 18.D.043 | New Jersey Solar Renewable Energy Certificate Future                            | \$0.01 | \$0.01 |
|          | PJM Tri Qualified Renewable Energy Certificate Class I Prior Year               |        |        |
| 18.D.044 | Future                                                                          | \$0.01 | \$0.01 |
| 18.D.045 | PJM Tri Qualified Renewable Energy Certificate Class I Future                   | \$0.01 | \$0.01 |
| 18.E.085 | Option on New Jersey Solar Renewable Energy Certificate Future                  | \$0.01 | \$0.01 |
|          | One Year Mid-Curve Option on New Jersey Solar Renewable Energy                  |        |        |
| 18.E.086 | Certificate Future                                                              | \$0.01 | \$0.01 |
|          | Two Year Mid-Curve Option on New Jersey Solar Renewable Energy                  |        |        |
| 18.E.087 | Certificate Future                                                              | \$0.01 | \$0.01 |
|          | Option on PJM Tri Qualified Renewable Energy Certificate Class I                |        |        |
| 18.E.088 | Future                                                                          | \$0.01 | \$0.01 |
|          | One Year Mid-Curve Option on PJM Tri Qualified Renewable Energy                 |        |        |
| 18.E.089 | Certificates Class I Future                                                     | \$0.01 | \$0.01 |
|          | Two Year Mid-Curve Option on PJM Tri Qualified Renewable Energy                 |        |        |
| 18.E.090 | Certificates Class I Future                                                     | \$0.01 | \$0.01 |

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# Resolution No. 2 – Position Limit/Accountability Table

|          |                                                  |                   |                  |                    | Spot                                   | Single Month                           | All Month                              | Aggregate 1            | Aggregate 2            | Exchange            |
|----------|--------------------------------------------------|-------------------|------------------|--------------------|----------------------------------------|----------------------------------------|----------------------------------------|------------------------|------------------------|---------------------|
| Rule     | Contract Name                                    | Commodity<br>Code | Contract<br>Size | Unit of<br>Trading | Month<br>Limit                         | Accountabili tv Level                  | Accountability<br>Level                | (Positive Correlation) | (Negative Correlation) | Reportable<br>Level |
| 110.0    | Connecticut Compliance Renewable                 |                   | 5.20             |                    |                                        | 9 2010                                 |                                        |                        |                        | 2010.               |
|          | Energy Certificate Class                         |                   |                  |                    |                                        |                                        | .=                                     |                        |                        |                     |
| 18.D.019 | 1 Vintage Future -<br>Vintage 2019               | CC9               | 100              | MWh of<br>REC      | <u>17,500</u><br>[ <del>15,000</del> ] | <u>17,500</u><br>[ <del>15,000</del> ] | <u>17,500</u><br>[ <del>15,000</del> ] | CTT                    |                        | 25                  |
| 10.D.019 | Connecticut                                      | 009               | 100              | RLO                | [10,000]                               | [10,000]                               | [10,000]                               | 011                    |                        | 25                  |
|          | Compliance Renewable                             |                   |                  |                    |                                        |                                        |                                        |                        |                        |                     |
|          | Energy Certificate Class                         |                   |                  | N 40 A / la - a f  | 47.500                                 | 47.500                                 | 47.500                                 |                        |                        |                     |
| 18.D.019 | 1 Vintage Future -<br>Vintage 2020               | CR0               | 100              | MWh of<br>REC      | <u>17,500</u><br>[ <del>15,000</del> ] | <u>17,500</u><br>[ <del>15,000</del> ] | <u>17,500</u><br>[ <del>15,000</del> ] | СТТ                    |                        | 25                  |
| 10.2.010 | Connecticut                                      | 0.10              | 100              | 1120               | [10,000]                               | [10,000]                               | [10,000]                               | 011                    |                        | 20                  |
|          | Compliance Renewable                             |                   |                  |                    |                                        |                                        |                                        |                        |                        |                     |
|          | Energy Certificate Class  1 Vintage Future -     |                   |                  | MWh of             | 17,500                                 | 17,500                                 | 17,500                                 |                        |                        |                     |
| 18.D.019 | Vintage 2021                                     | CR1               | 100              | REC                | [ <del>17,300</del> ]                  | [ <del>17,300</del> ]                  | 17,300<br>[ <del>15,000</del> ]        | CTT                    |                        | 25                  |
|          | Connecticut                                      |                   |                  |                    |                                        |                                        |                                        |                        |                        |                     |
|          | Compliance Renewable<br>Energy Certificate Class |                   |                  |                    |                                        |                                        |                                        |                        |                        |                     |
|          | 1 Vintage Future -                               |                   |                  | MWh of             | 17,500                                 | 17,500                                 | 17,500                                 |                        |                        |                     |
| 18.D.019 | Vintage 2022                                     | CR2               | 100              | REC                | [ <del>15,000</del> ]                  | [ <del>15,000</del> ]                  | [ <del>15,000</del> ]                  | CTT                    |                        | 25                  |
|          | Connecticut                                      |                   |                  |                    |                                        |                                        |                                        |                        |                        |                     |
|          | Compliance Renewable<br>Energy Certificate Class |                   |                  |                    |                                        |                                        |                                        |                        |                        |                     |
|          | 1 Vintage Future -                               |                   |                  | MWh of             | 17,500                                 | 17,500                                 | 17,500                                 |                        |                        |                     |
| 18.D.019 | Vintage 2023                                     | CR3               | 100              | REC                | [ <del>15,000</del> ]                  | [ <del>15,000</del> ]                  | [ <del>15,000</del> ]                  | CTT                    |                        | 25                  |
|          | Connecticut Compliance Renewable                 |                   |                  |                    |                                        |                                        |                                        |                        |                        |                     |
|          | Energy Certificate Class                         |                   |                  |                    |                                        |                                        |                                        |                        |                        |                     |
|          | 1 Vintage Future -                               |                   |                  | MWh of             | <u>17,500</u>                          | <u>17,500</u>                          | <u>17,500</u>                          |                        |                        |                     |
| 18.D.019 | Vintage 2015                                     | CC5               | 100              | REC                | [3,800]                                | [ <del>3,800</del> ]                   | [ <del>3,800</del> ]                   | CTT                    |                        | 25                  |
|          | Connecticut Compliance Renewable                 |                   |                  | MWh of             | <u>17,500</u>                          | <u>17,500</u>                          | <u> 17,500</u>                         |                        |                        |                     |
| 18.D.019 | Energy Certificate Class                         | CC6               | 100              | REC                | 17,300<br>[ <del>15,000</del> ]        | 17,500<br>[ <del>15,000</del> ]        | <u>17,500</u><br>[ <del>15,000</del> ] | СТТ                    |                        | 25                  |

|          | 1 Vintage Future -<br>Vintage 2016                                                                |            |     |               |                                        |                                        |                                        |            |   |           |
|----------|---------------------------------------------------------------------------------------------------|------------|-----|---------------|----------------------------------------|----------------------------------------|----------------------------------------|------------|---|-----------|
| 18.D.019 | Connecticut Compliance Renewable Energy Certificate Class 1 Vintage Future - Vintage 2017         | CC7        | 100 | MWh of<br>REC | 17,500<br>[45,000]                     | <u>17,500</u><br>[ <del>15,000</del> ] | <u>17,500</u><br>[ <del>15,000</del> ] | СТТ        |   | 25        |
| 18.D.019 | Connecticut Compliance Renewable Energy Certificate Class 1 Vintage Future - Vintage 2018         | CC8        | 100 | MWh of<br>REC | <u>17,500</u><br>[ <del>15,000</del> ] | <u>17,500</u><br>[ <del>15,000</del> ] | <u>17,500</u><br>[ <del>15,000</del> ] | СТТ        |   | 25        |
|          | Connecticut Compliance Renewable Energy Certificate Class                                         |            |     | MWh of        |                                        |                                        |                                        |            |   |           |
| 18.D.039 | I Future  Maryland Compliance Renewable Energy Certificate Tier 1 Vintage Future -                | <u>CTT</u> | 100 | REC<br>Mwh of | <u>17,500</u><br>62,500                | 17,500<br>62,500                       | 17,500                                 | <u>CTT</u> | _ | <u>25</u> |
| 18.D.029 | Vintage 2016                                                                                      | MC6        | 100 | REC           | [ <del>30,000</del> ]                  | [ <del>30,000</del> ]                  | <u>62,500</u> [ <del>30,000</del> ]    | MDE        |   | 25        |
| 18.D.029 | Maryland Compliance<br>Renewable Energy<br>Certificate Tier 1<br>Vintage Future -<br>Vintage 2017 | MC7        | 100 | Mwh of<br>REC | 62,500<br>[ <del>30,000</del> ]        | <u>62,500</u><br>[ <del>30,000</del> ] | 62,500 [ <del>30,000</del> ]           | MDE        |   | 25        |
| 18.D.029 | Maryland Compliance<br>Renewable Energy<br>Certificate Tier 1<br>Vintage Future -<br>Vintage 2018 | MC8        | 100 | Mwh of<br>REC | 62,500<br>[30,000]                     | 62,500<br>[30,000]                     | 62,500 [ <del>30,000</del> ]           | MDE        |   | 25        |
|          | Maryland Compliance Renewable Energy Certificate Tier 1 Vintage Future -                          |            |     | Mwh of        | <u>62,500</u>                          | 62,500                                 |                                        |            |   |           |
| 18.D.029 | Vintage 2019  Maryland Compliance Renewable Energy Certificate Tier 1 Vintage Future -            | MC9        | 100 | REC<br>Mwh of | [ <del>30,000</del> ]<br>62,500        | [ <del>30,000</del> ]<br><u>62,500</u> | <u>62,500</u> [ <del>30,000</del> ]    | MDE        |   | 25        |
| 18.D.029 | Vintage 2020                                                                                      | MC0        | 100 | REC           | [ <del>30,000</del> ]                  | [ <del>30,000</del> ]                  | <u>62,500</u> [ <del>30,000</del> ]    | MDE        |   | 25        |
| 18.D.029 | Maryland Compliance<br>Renewable Energy<br>Certificate Tier 1                                     | MC1        | 100 | Mwh of<br>REC | 62,500<br>[ <del>30,000</del> ]        | 62,500<br>[ <del>30,000</del> ]        | <u>62,500</u> [ <del>30,000</del> ]    | MDE        |   | 25        |

|          | Vintage Future -<br>Vintage 2021                                                                  |     |            |                |                                       |                                       |                                     |      |   |           |
|----------|---------------------------------------------------------------------------------------------------|-----|------------|----------------|---------------------------------------|---------------------------------------|-------------------------------------|------|---|-----------|
| 18.D.029 | Maryland Compliance<br>Renewable Energy<br>Certificate Tier 1<br>Vintage Future -<br>Vintage 2022 | MC2 | 100        | Mwh of<br>REC  | 62,500<br>[ <del>30,000</del> ]       | 62,500<br>[ <del>30,000</del> ]       | 62,500 [ <del>30,000</del> ]        | MDE  |   | 25        |
|          | Maryland Compliance<br>Renewable Energy<br>Certificate Tier 1<br>Vintage Future -                 |     |            | Mwh of         | <u>62,500</u>                         | 62,500                                |                                     |      |   |           |
| 18.D.029 | Vintage 2023                                                                                      | MC3 | 100        | REC            | [ <del>30,000</del> ]                 | [ <del>30,000</del> ]                 | <u>62,500</u> [ <del>30,000</del> ] | MDE  |   | 25        |
| 18.D.035 | Maryland Compliance Renewable Energy Credit Tier 1 Future                                         | MDE | <u>100</u> | MWh of<br>REC  | 62,500                                | <u>62,500</u>                         | 62,500                              | MDE_ |   | <u>25</u> |
|          | Maryland Solar<br>Renewable Energy<br>Certificate Future -                                        |     |            | MWh of         | 12,000                                | 12,000                                |                                     |      | _ |           |
| 18.D.026 | Vintage 2016                                                                                      | MD6 | 10         | SREC           | [ <del>5,000</del> ]                  | [ <del>5,000</del> ]                  | <u>12,000</u> [ <del>5,000</del> ]  | MDX  |   | 25        |
|          | Maryland Solar<br>Renewable Energy<br>Certificate Future -                                        |     |            | MWh of         | 12,000                                | 12,000                                |                                     |      |   |           |
| 18.D.026 | Vintage 2017                                                                                      | MD7 | 10         | SREC           | [ <del>5,000</del> ]                  | [ <del>5,000</del> ]                  | <u>12,000</u> [ <del>5,000</del> ]  | MDX  |   | 25        |
| 18.D.026 | Maryland Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2018                        | MD8 | 10         | MWh of<br>SREC | <u>12,000</u><br>[ <del>5,000</del> ] | <u>12,000</u><br>[ <del>5,000</del> ] | <u>12,000</u> [ <del>5,000</del> ]  | MDX  |   | 25        |
| 18.D.026 | Maryland Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2019                        | MD9 | 10         | MWh of<br>SREC | 12,000<br>[ <del>5,000</del> ]        | <u>12,000</u><br>[ <del>5,000</del> ] | 12,000 [ <del>5,000</del> ]         | MDX  |   | 25        |
| 18.D.026 | Maryland Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2020                        | MD0 | 10         | MWh of<br>SREC | 12,000<br>[ <del>5,000</del> ]        | 12,000<br>[ <del>5,000</del> ]        | 12,000 [ <del>5,000</del> ]         | MDX  |   | 25        |
|          | Maryland Solar<br>Renewable Energy<br>Certificate Future -                                        |     |            | MWh of         | 12,000                                | 12,000                                |                                     |      |   |           |
| 18.D.026 | Vintage 2021                                                                                      | MD1 | 10         | SREC           | [ <del>5,000</del> ]                  | [ <del>5,000</del> ]                  | <u>12,000</u> [ <del>5,000</del> ]  | MDX  |   | 25        |
| 18.D.026 | Maryland Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2022                        | MD2 | 10         | MWh of<br>SREC | <u>12,000</u><br>[ <del>5,000</del> ] | <u>12,000</u><br>[ <del>5,000</del> ] | <u>12,000</u> [ <del>5,000</del> ]  | MDX  |   | 25        |

|          | Maryland Solar                        |       |     |        |                                       |                                        |                                     |       |   |     |
|----------|---------------------------------------|-------|-----|--------|---------------------------------------|----------------------------------------|-------------------------------------|-------|---|-----|
|          | Renewable Energy Certificate Future - |       |     | MWh of | 12.000                                | 12.000                                 |                                     |       |   |     |
| 18.D.026 | Vintage 2023                          | MD3   | 10  | SREC   | <u>12,000</u><br>[ <del>5,000</del> ] | <u>12,000</u><br>[ <del>5,000</del> ]  | 12,000 [ <del>5,000</del> ]         | MDX   |   | 25  |
| 16.D.026 | Maryland Solar                        | ואוטט | 10  | SKEC   | [ <del>0,000</del> ]                  | [ <del>0,000</del> ]                   | 12,000 [ <del>3,000</del> ]         | IVIDA |   | 25  |
|          | Renewable Energy                      |       |     | MWh of |                                       |                                        |                                     |       |   |     |
| 18.D.037 | Credit Future                         | MDX   | 10  | SREC   | 12,000                                | 12,000                                 | 12,000                              | MDX   |   | 25  |
| 10.D.037 | Massachusetts                         | IVIDA | 10  | SILLO  | 12,000                                | 12,000                                 | 12,000                              | IVIDA | _ | 20  |
|          | Compliance Renewable                  |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Energy Certificate Class              |       |     |        |                                       |                                        |                                     |       |   |     |
|          | 1 Vintage Future -                    |       |     | Mwh of | 15,000                                | 15,000                                 |                                     |       |   |     |
| 18.D.017 | Vintage 2015                          | MB5   | 100 | REC    | [ <del>3,500</del> ]                  | [ <del>6,000</del> ]                   | <u>15,000</u> [ <del>12,000</del> ] | MCL   |   | 25  |
| 10.2.017 | Massachusetts                         | IVIDO | 100 | INEO   | [0,000]                               | [0,000]                                | 10,000 [12,000]                     | WOL   |   | 20  |
|          | Compliance Renewable                  |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Energy Certificate Class              |       |     |        |                                       |                                        |                                     |       |   |     |
|          | 1 Vintage Future -                    |       |     | Mwh of | 15,000                                | <u>15,000</u>                          |                                     |       |   |     |
| 18.D.017 | Vintage 2016                          | MB6   | 100 | REC    | $[\frac{12,500}{1}]$                  | [ <del>12,500</del> ]                  | <u>15,000</u> [ <del>12,500</del> ] | MCL   |   | 25  |
|          | Massachusetts                         |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Compliance Renewable                  |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Energy Certificate Class              |       |     |        |                                       |                                        |                                     |       |   |     |
|          | 1 Vintage Future -                    |       |     | Mwh of | <u>15,000</u>                         | <u>15,000</u>                          |                                     |       |   |     |
| 18.D.017 | Vintage 2017                          | MB7   | 100 | REC    | $[\frac{12,500}{}]$                   | [ <del>12,500</del> ]                  | <u>15,000</u> [ <del>12,500</del> ] | MCL   |   | 25  |
|          | Massachusetts                         |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Compliance Renewable                  |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Energy Certificate Class              |       |     |        |                                       |                                        |                                     |       |   |     |
|          | 1 Vintage Future -                    |       |     | Mwh of | <u>15,000</u>                         | <u>15,000</u>                          |                                     |       |   |     |
| 18.D.017 | Vintage 2018                          | MB8   | 100 | REC    | [ <del>12,500</del> ]                 | [ <del>12,500</del> ]                  | <u>15,000</u> [ <del>12,500</del> ] | MCL   |   | 25  |
|          | Massachusetts                         |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Compliance Renewable                  |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Energy Certificate Class              |       |     |        |                                       |                                        |                                     |       |   |     |
| <u>-</u> | 1 Vintage Future -                    |       |     | Mwh of | <u>15,000</u>                         | <u>15,000</u>                          |                                     |       |   |     |
| 18.D.017 | Vintage 2019                          | MB9   | 100 | REC    | [ <del>12,500</del> ]                 | [ <del>12,500</del> ]                  | <u>15,000</u> [ <del>12,500</del> ] | MCL   |   | 25  |
|          | Massachusetts                         |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Compliance Renewable                  |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Energy Certificate Class              |       |     | l      |                                       |                                        |                                     |       |   |     |
| 10 5 017 | 1 Vintage Future -                    | MDO   | 400 | Mwh of | <u>15,000</u>                         | <u>15,000</u>                          | 45 000 540 5001                     |       |   | 0.5 |
| 18.D.017 | Vintage 2020                          | MB0   | 100 | REC    | [ <del>12,500</del> ]                 | [ <del>12,500</del> ]                  | <u>15,000</u> [ <del>12,500</del> ] | MCL   |   | 25  |
|          | Massachusetts                         |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Compliance Renewable                  |       |     |        |                                       |                                        |                                     |       |   |     |
|          | Energy Certificate Class              |       |     | Mwh of | 15,000                                | 15 000                                 |                                     |       |   |     |
| 10 D 017 | 1 Vintage Future -                    | MD4   | 100 | REC    | 15,000<br>[ <del>12,500</del> ]       | <u>15,000</u><br>[ <del>12,500</del> ] | 15 000 [12 500]                     | MCI   |   | 25  |
| 18.D.017 | Vintage 2021                          | MB1   | 100 |        |                                       |                                        | <u>15,000</u> [ <del>12,500</del> ] | MCL   |   | 25  |
|          | Massachusetts                         |       |     | Mwh of | <u>15,000</u>                         | <u>15,000</u>                          |                                     |       |   |     |
| 18.D.017 | Compliance Renewable                  | MB2   | 100 | REC    | [ <del>12,500</del> ]                 | [ <del>12,500</del> ]                  | <u>15,000</u> [ <del>12,500</del> ] | MCL   |   | 25  |

|          | Energy Certificate Class 1 Vintage Future -                                     |            |            |                |                                 |                                        |                                     |            |   |           |
|----------|---------------------------------------------------------------------------------|------------|------------|----------------|---------------------------------|----------------------------------------|-------------------------------------|------------|---|-----------|
|          | Vintage 2022                                                                    |            |            |                |                                 |                                        |                                     |            |   |           |
| 40 D 047 | Massachusetts Compliance Renewable Energy Certificate Class 1 Vintage Future -  | MD2        | 100        | Mwh of         | <u>15,000</u>                   | 15,000                                 | 45 000 [42 500]                     | MCI        |   | 25        |
| 18.D.017 | Vintage 2023  Massachusetts                                                     | MB3        | 100        | REC            | [ <del>12,500</del> ]           | [ <del>12,500</del> ]                  | <u>15,000</u> [ <del>12,500</del> ] | MCL        |   | 25        |
| 18.D.040 | Compliance Renewable Energy Certificate Class I Future Massachusetts Solar      | <u>MCL</u> | <u>100</u> | MWh of REC     | <u>15,000</u>                   | <u>15,000</u>                          | <u>15,000</u>                       | <u>MCL</u> | _ | <u>25</u> |
| 18.D.021 | Renewable Energy<br>Certificate Future -<br>Vintage 2015                        | MQ5        | 10         | MWh of<br>SREC | 18,000<br>[ <del>2,000</del> ]  | <u>18,000</u><br>[ <del>2,000</del> ]  | 18,000 [ <del>2,000</del> ]         | MSF        |   | 25        |
| 18.D.021 | Massachusetts Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2016 | MQ6        | 10         | MWh of<br>SREC | 18,000<br>[ <del>12,500</del> ] | <u>18,000</u><br>[ <del>12,500</del> ] | 18,000 [ <del>12,500</del> ]        | MSF        |   | 25        |
| 18.D.021 | Massachusetts Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2017 | MQ7        | 10         | MWh of<br>SREC | 18,000<br>[ <del>12,500</del> ] | 18,000<br>[ <del>12,500</del> ]        | 18,000 [ <del>12,500</del> ]        | MSF        |   | 25        |
| 18.D.021 | Massachusetts Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2018 | MQ8        | 10         | MWh of<br>SREC | 18,000<br>[ <del>12,500</del> ] | 18,000<br>[ <del>12,500</del> ]        | 18,000 [ <del>12,500</del> ]        | MSF        |   | 25        |
| 18.D.021 | Massachusetts Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2019 | MQ9        | 10         | MWh of<br>SREC | 18,000<br>[ <del>12,500</del> ] | 18,000<br>[ <del>12,500</del> ]        | 18,000 [ <del>12,500</del> ]        | MSF        |   | 25        |
| 18.D.021 | Massachusetts Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2020 | MQ0        | 10         | MWh of<br>SREC | 18,000<br>[ <del>12,500</del> ] | <u>18,000</u><br>[ <del>12,500</del> ] | 18,000 [ <del>12,500</del> ]        | MSF        |   | 25        |
| 18.D.021 | Massachusetts Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2021 | MQ1        | 10         | MWh of<br>SREC | 18,000<br>[ <del>12,500</del> ] | <u>18,000</u><br>[ <del>12,500</del> ] | <u>18,000</u> [ <del>12,500</del> ] | MSF        |   | 25        |
| 18.D.021 | Massachusetts Solar<br>Renewable Energy<br>Certificate Future -<br>Vintage 2022 | MQ2        | 10         | MWh of<br>SREC | 18,000<br>[ <del>12,500</del> ] | <u>18,000</u><br>[ <del>12,500</del> ] | <u>18,000</u> [ <del>12,500</del> ] | MSF        |   | 25        |

|          | Massachusetts Solar      |                |           | İ              | 1                    |                                   |                                     |              |   |           |
|----------|--------------------------|----------------|-----------|----------------|----------------------|-----------------------------------|-------------------------------------|--------------|---|-----------|
|          | Renewable Energy         |                |           |                |                      |                                   |                                     |              |   |           |
|          | Certificate Future -     |                |           | MWh of         | <u>18,000</u>        | <u>18,000</u>                     |                                     |              |   |           |
| 18.D.021 | Vintage 2023             | MQ3            | 10        | SREC           | $[\frac{12,500}{}]$  | $[\frac{12,500}{}]$               | <u>18,000</u> [ <del>12,500</del> ] | MSF          |   | 25        |
|          | Massachusetts Solar      |                |           |                |                      |                                   |                                     |              |   |           |
|          | Renewable Energy         |                |           |                |                      |                                   |                                     |              |   |           |
|          | Certificate Carve Out I  |                |           | MWh of         |                      |                                   |                                     |              |   |           |
| 18.D.032 | <u>Future</u>            | <u>MSF</u>     | <u>10</u> | <u>SREC</u>    | <u>18,000</u>        | <u>18,000</u>                     | <u>18,000</u>                       | <u>MSF</u>   | _ | <u>25</u> |
|          | Massachusetts Solar      |                |           |                |                      |                                   |                                     |              |   |           |
|          | Renewable Energy         |                |           |                |                      |                                   |                                     |              |   |           |
|          | Certificate Carve Out II |                |           | MWh of         | <u>6,250</u>         |                                   |                                     |              |   |           |
| 18.D.023 | Future - Vintage 2016    | MA6            | 10        | SREC           | [ <del>4,000</del> ] | <u>6,250</u> [ <del>4,000</del> ] | <u>6,250</u> [ <del>4,000</del> ]   | MS2          |   | 25        |
|          | Massachusetts Solar      |                |           |                |                      |                                   |                                     |              |   |           |
|          | Renewable Energy         |                |           |                |                      |                                   |                                     |              |   |           |
|          | Certificate Carve Out II |                |           | MWh of         | <u>6,250</u>         |                                   |                                     |              |   |           |
| 18.D.023 | Future - Vintage 2017    | MA7            | 10        | SREC           | [4,000]              | <u>6,250</u> [4,000]              | <u>6,250</u> [4 <del>,000</del> ]   | MS2          |   | 25        |
|          | Massachusetts Solar      |                |           |                |                      |                                   |                                     |              |   |           |
|          | Renewable Energy         |                |           |                |                      |                                   |                                     |              |   |           |
|          | Certificate Carve Out II |                |           | MWh of         | <u>6,250</u>         |                                   |                                     |              |   |           |
| 18.D.023 | Future - Vintage 2018    | MA8            | 10        | SREC           | [4,000]              | <u>6,250</u> [ <del>4,000</del> ] | <u>6,250</u> [ <del>4,000</del> ]   | MS2          |   | 25        |
|          | Massachusetts Solar      |                |           |                |                      |                                   |                                     |              |   |           |
|          | Renewable Energy         |                |           |                |                      |                                   |                                     |              |   |           |
|          | Certificate Carve Out II |                |           | MWh of         | <u>6,250</u>         |                                   |                                     |              |   |           |
| 18.D.023 | Future - Vintage 2019    | MA9            | 10        | SREC           | [ <del>4,000</del> ] | <u>6,250</u> [ <del>4,000</del> ] | <u>6,250</u> [ <del>4,000</del> ]   | MS2          |   | 25        |
|          | Massachusetts Solar      |                |           |                |                      |                                   |                                     |              |   |           |
|          | Renewable Energy         |                |           |                |                      |                                   |                                     |              |   |           |
|          | Certificate Carve Out II |                |           | MWh of         | <u>6,250</u>         |                                   |                                     |              |   |           |
| 18.D.023 | Future - Vintage 2020    | MA0            | 10        | SREC           | [ <del>4,000</del> ] | <u>6,250</u> [ <del>4,000</del> ] | <u>6,250</u> [ <del>4,000</del> ]   | MS2          |   | 25        |
|          | Massachusetts Solar      |                |           |                |                      |                                   |                                     |              |   |           |
|          | Renewable Energy         |                |           |                |                      |                                   |                                     |              |   |           |
|          | Certificate Carve Out II |                |           | MWh of         | 6,250                |                                   |                                     |              |   |           |
| 18.D.023 | Future - Vintage 2021    | MA1            | 10        | SREC           | [ <del>4,000</del> ] | <u>6,250</u> [ <del>4,000</del> ] | <u>6,250</u> [ <del>4,000</del> ]   | MS2          |   | 25        |
|          | Massachusetts Solar      |                |           |                |                      |                                   |                                     |              |   |           |
|          | Renewable Energy         |                |           |                |                      |                                   |                                     |              |   |           |
| 40 5 000 | Certificate Carve Out II | 1440           | 4.0       | MWh of         | <u>6,250</u>         | 0.050.54.0003                     | 0.050.54.0003                       |              |   | 0.5       |
| 18.D.023 | Future - Vintage 2022    | MA2            | 10        | SREC           | [ <del>4,000</del> ] | <u>6,250</u> [ <del>4,000</del> ] | <u>6,250</u> [4 <del>,000</del> ]   | MS2          |   | 25        |
|          | Massachusetts Solar      |                |           |                |                      |                                   |                                     |              |   |           |
|          | Renewable Energy         |                |           | NAVA 4         | 0.050                |                                   |                                     |              |   |           |
| 10 D 000 | Certificate Carve Out II | MAG            | 10        | MWh of         | 6,250                | 6 050 [4 000]                     | 6.050.[4.000]                       | MCO          |   | 25        |
| 18.D.023 | Future - Vintage 2023    | MA3            | 10        | SREC           | [4,000]              | <u>6,250</u> [4,000]              | <u>6,250</u> [4 <del>,000</del> ]   | MS2          |   | 25        |
|          | Massachusetts Solar      |                |           |                |                      |                                   |                                     |              |   |           |
|          | Renewable Energy         |                |           | NAVA of        |                      |                                   |                                     |              |   |           |
| 10 D 022 | Certificate Carve Out II | MS2            | 10        | MWh of<br>SREC | 6,250                | 6,250                             | 6,250                               | MS2          |   | 25        |
| 18.D.033 | <u>Future</u>            | <u>IVI 5 Z</u> | <u>10</u> | OKEU           | <u>0,25U</u>         | <u>0,25U</u>                      | <u>0,∠5U</u>                        | <u>IVIOZ</u> | _ | <u> </u>  |

|          | NEPOOL Dual Qualified               |            |            |               |                                        |                                        |                                     |            |   |           |
|----------|-------------------------------------|------------|------------|---------------|----------------------------------------|----------------------------------------|-------------------------------------|------------|---|-----------|
|          | Renewable Energy                    |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Certificate Class 1                 |            |            | B 40 A / 1 C  | 45.000                                 | 45.000                                 |                                     |            |   |           |
| 18.D.030 | Vintage Future -                    | NE6        | 100        | MWh of<br>REC | <u>15,000</u><br>[ <del>10,000</del> ] | <u>15,000</u><br>[ <del>10,000</del> ] | 15,000 [ <del>10,000</del> ]        | NER        |   | 25        |
| 16.0.030 | Vintage 2016  NEPOOL Dual Qualified | INEO       | 100        | REC           | [ <del>10,000</del> ]                  | [ <del>10,000</del> ]                  | 15,000 [ <del>10,000</del> ]        | NEK        |   | 20        |
|          | Renewable Energy                    |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Certificate Class 1                 |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Vintage Future -                    |            |            | MWh of        | 15,000                                 | 15,000                                 |                                     |            |   |           |
| 18.D.030 | Vintage 2017                        | NE7        | 100        | REC           | [ <del>10,000</del> ]                  | [ <del>10,000</del> ]                  | 15,000 [ <del>10,000</del> ]        | NER        |   | 25        |
| 16.0.030 | NEPOOL Dual Qualified               | INC /      | 100        | REC           | [+0,000]                               | [ <del>10,000</del> ]                  | 15,000 [ <del>10,000</del> ]        | NEIX       |   | 25        |
|          | Renewable Energy                    |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Certificate Class 1                 |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Vintage Future -                    |            |            | MWh of        | 15,000                                 | <u>15,000</u>                          |                                     |            |   |           |
| 18.D.030 | Vintage 2018                        | NE8        | 100        | REC           | [ <del>10,000</del> ]                  | [ <del>10,000</del> ]                  | 15,000 [ <del>10,000</del> ]        | NER        |   | 25        |
| 10.0.000 | NEPOOL Dual Qualified               | INLO       | 100        | INLO          | [10,000]                               | [10,000]                               | 10,000 [10,000]                     | INEIX      |   | 20        |
|          | Renewable Energy                    |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Certificate Class 1                 |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Vintage Future -                    |            |            | MWh of        | 15,000                                 | 15,000                                 |                                     |            |   |           |
| 18.D.030 | Vintage 2019                        | NE9        | 100        | REC           | [ <del>10,000</del> ]                  | [ <del>10,000</del> ]                  | 15,000 [ <del>10,000</del> ]        | NER        |   | 25        |
| 10.2.000 | NEPOOL Dual Qualified               | 0          |            |               | [:0,000]                               | [10,000]                               | <u>,</u>                            |            |   |           |
|          | Renewable Energy                    |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Certificate Class 1                 |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Vintage Future -                    |            |            | MWh of        | 15,000                                 | 15,000                                 |                                     |            |   |           |
| 18.D.030 | Vintage 2020                        | NE0        | 100        | REC           | [10,000]                               | [ <del>10,000</del> ]                  | 15,000 [ <del>10,000</del> ]        | NER        |   | 25        |
|          | NEPOOL Dual Qualified               |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Renewable Energy                    |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Certificate Class 1                 |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Vintage Future -                    |            |            | MWh of        | <u>15,000</u>                          | <u>15,000</u>                          |                                     |            |   |           |
| 18.D.030 | Vintage 2021                        | NE1        | 100        | REC           | [ <del>10,000</del> ]                  | [ <del>10,000</del> ]                  | 15,000 [ <del>10,000</del> ]        | NER        |   | 25        |
|          | NEPOOL Dual Qualified               |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Renewable Energy                    |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Certificate Class 1                 |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Vintage Future -                    |            |            | MWh of        | <u>15,000</u>                          | <u>15,000</u>                          |                                     |            |   |           |
| 18.D.030 | Vintage 2022                        | NE2        | 100        | REC           | [ <del>10,000</del> ]                  | [ <del>10,000</del> ]                  | <u>15,000</u> [ <del>10,000</del> ] | NER        |   | 25        |
|          | NEPOOL Dual Qualified               |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Renewable Energy                    |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Certificate Class 1                 |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Vintage Future -                    |            |            | MWh of        | <u>15,000</u>                          | <u>15,000</u>                          |                                     |            |   |           |
| 18.D.030 | Vintage 2023                        | NE3        | 100        | REC           | [ <del>10,000</del> ]                  | [ <del>10,000</del> ]                  | <u>15,000</u> [ <del>10,000</del> ] | NER        |   | 25        |
|          | NEPOOL Dual Qualified               |            |            |               |                                        |                                        |                                     |            |   |           |
|          | Compliance Renewable                |            |            |               |                                        |                                        |                                     |            |   |           |
| 1        | Energy Certificate Class            |            |            | MWh of        |                                        |                                        |                                     |            |   |           |
| 18.D.041 | <u>l Future</u>                     | <u>NER</u> | <u>100</u> | REC           | <u>15,000</u>                          | <u>15,000</u>                          | <u>15,000</u>                       | <u>NER</u> | _ | <u>25</u> |

|          | New Jersey Compliance<br>Renewable Energy |      |     |        |                       |                       |                                     |        |              |     |
|----------|-------------------------------------------|------|-----|--------|-----------------------|-----------------------|-------------------------------------|--------|--------------|-----|
|          | Certificate Class 1                       |      |     |        |                       |                       |                                     |        |              |     |
|          | Vintage Future -                          |      |     | Mwh of | 47,500                | 47,500                |                                     |        |              |     |
| 18.D.018 | Vintage 2015                              | NCR  | 100 | REC    | [3,500]               | [8,000]               | 47,500 [ <del>16,000</del> ]        | NJN    |              | 25  |
|          | New Jersey Compliance                     |      |     |        |                       |                       |                                     |        |              |     |
|          | Renewable Energy                          |      |     |        |                       |                       |                                     |        |              |     |
|          | Certificate Class 1                       |      |     |        |                       |                       |                                     |        |              |     |
|          | Vintage Future -                          |      |     | Mwh of | <u>47,500</u>         | <u>47,500</u>         |                                     |        |              |     |
| 18.D.018 | Vintage 2016                              | NCS  | 100 | REC    | [40,000]              | [40,000]              | <u>47,500</u> [4 <del>0,000</del> ] | NJN    |              | 25  |
|          | New Jersey Compliance                     |      |     |        |                       |                       |                                     |        |              |     |
|          | Renewable Energy                          |      |     |        |                       |                       |                                     |        |              |     |
|          | Certificate Class 1                       |      |     |        | 47.500                | 47.500                |                                     |        |              |     |
| 40 D 040 | Vintage Future -                          | NOT  | 400 | Mwh of | 47,500                | <u>47,500</u>         | 47 500 [40 000]                     | NI INI |              | 0.5 |
| 18.D.018 | Vintage 2017                              | NCT  | 100 | REC    | [40,000]              | [40,000]              | <u>47,500</u> [ <del>40,000</del> ] | NJN    |              | 25  |
|          | New Jersey Compliance<br>Renewable Energy |      |     |        |                       |                       |                                     |        |              |     |
|          | Certificate Class 1                       |      |     |        |                       |                       |                                     |        |              |     |
|          | Vintage Future -                          |      |     | Mwh of | 47,500                | 47,500                |                                     |        |              |     |
| 18.D.018 | Vintage 2018                              | NCU  | 100 | REC    | [ <del>40,000</del> ] | [ <del>40,000</del> ] | 47,500 [ <del>40,000</del> ]        | NJN    |              | 25  |
| 10.D.010 | New Jersey Compliance                     | 1100 | 100 | INLO   | [40,000]              | [40,000]              | <u>47,000</u> [ <del>40,000</del> ] | 14014  |              | 25  |
|          | Renewable Energy                          |      |     |        |                       |                       |                                     |        |              |     |
|          | Certificate Class 1                       |      |     |        |                       |                       |                                     |        |              |     |
|          | Vintage Future -                          |      |     | Mwh of | 47,500                | 47,500                |                                     |        |              |     |
| 18.D.018 | Vintage 2019                              | NCV  | 100 | REC    | [40,000]              | [40,000]              | <u>47,500</u> [4 <del>0,000</del> ] | NJN    |              | 25  |
|          | New Jersey Compliance                     |      |     |        |                       |                       |                                     |        |              |     |
|          | Renewable Energy                          |      |     |        |                       |                       |                                     |        |              |     |
|          | Certificate Class 1                       |      |     |        |                       |                       |                                     |        |              |     |
|          | Vintage Future -                          |      |     | Mwh of | <u>47,500</u>         | <u>47,500</u>         |                                     |        |              |     |
| 18.D.018 | Vintage 2020                              | NCW  | 100 | REC    | [40,000]              | [ <del>40,000</del> ] | <u>47,500</u> [ <del>40,000</del> ] | NJN    |              | 25  |
|          | New Jersey Compliance                     |      |     |        |                       |                       |                                     |        |              |     |
|          | Renewable Energy                          |      |     |        |                       |                       |                                     |        |              |     |
|          | Certificate Class 1                       |      |     |        |                       |                       |                                     |        |              |     |
| 40 D 040 | Vintage Future -                          | NOV  | 400 | Mwh of | 47,500                | <u>47,500</u>         | 47 500 [40 000]                     |        |              | 0.5 |
| 18.D.018 | Vintage 2021                              | NCX  | 100 | REC    | [40,000]              | [ <del>40,000</del> ] | <u>47,500</u> [ <del>40,000</del> ] | NJN    |              | 25  |
|          | New Jersey Compliance                     |      |     |        |                       |                       |                                     |        |              |     |
|          | Renewable Energy<br>Certificate Class 1   |      |     |        |                       |                       |                                     |        |              |     |
|          | Vintage Future -                          |      |     | Mwh of | 47,500                | <u>47,500</u>         |                                     |        |              |     |
| 18.D.018 | Vintage 2022                              | NCY  | 100 | REC    | [40,000]              | [4 <del>0,000</del> ] | 47,500 [ <del>40,000</del> ]        | NJN    |              | 25  |
| 10.0.010 | New Jersey Compliance                     | 1101 | 100 | INEO   | [-10,000]             | [-10,000]             | <u> </u>                            | 14014  | <del> </del> | 20  |
|          | Renewable Energy                          |      |     |        |                       |                       |                                     |        |              |     |
|          | Certificate Class 1                       |      |     | Mwh of | 47,500                | <u>47,500</u>         |                                     |        |              |     |
| 18.D.018 | Vintage Future -                          | NCZ  | 100 | REC    | [40,000]              | [ <del>40,000</del> ] | <u>47,500</u> [ <del>40,000</del> ] | NJN    |              | 25  |

|          | Vintage 2023                                                                     |       |     |               |                                 |                                 |                                     |       |   |           |
|----------|----------------------------------------------------------------------------------|-------|-----|---------------|---------------------------------|---------------------------------|-------------------------------------|-------|---|-----------|
| 18.D.034 | New Jersey Compliance Renewable Energy Certificate Class I Future                | NJN   | 100 | MWh of<br>REC | 47,500                          | 47,500                          | 47,500                              | NJN   |   | 25        |
| 10.0.004 | New Jersey Solar<br>Renewable Energy<br>Certificate Future -                     | INOIN | 100 | IKEO          | 45,000                          | 45,000                          | 47,000                              | 14014 | - | <u>20</u> |
| 18.D.015 | Energy Year 2013                                                                 | NJE   | 10  | MWh           | [ <del>2,500</del> ]            | [ <del>5,000</del> ]            | <u>45,000</u> [ <del>10,000</del> ] | NPS   |   | 25        |
| 18.D.015 | New Jersey Solar<br>Renewable Energy<br>Certificate Future -<br>Energy Year 2014 | NJF   | 10  | MWh           | 45,000<br>[ <del>2,500</del> ]  | 45,000<br>[ <del>5,000</del> ]  | <u>45,000</u> [ <del>10,000</del> ] | NPS   |   | 25        |
| 18.D.015 | New Jersey Solar<br>Renewable Energy<br>Certificate Future -                     | NJG   | 10  | MWh           | 45,000<br>[ <del>2,500</del> ]  | 45,000<br>[ <del>5,000</del> ]  | 45,000 [ <del>10,000</del> ]        | NPS   |   | 25        |
| 16.D.015 | Energy Year 2015  New Jersey Solar Renewable Energy Certificate Future -         | NJG   | 10  | IVIVVII       | 45,000                          | 45,000                          | <u>45,000</u> [ <del>10,000</del> ] | INFO  |   | 25        |
| 18.D.015 | Energy Year 2016                                                                 | NJH   | 10  | MWh           | [ <del>37,500</del> ]           | [ <del>37,500</del> ]           | <u>45,000</u> [ <del>37,500</del> ] | NPS   |   | 25        |
| 18.D.015 | New Jersey Solar<br>Renewable Energy<br>Certificate Future -<br>Energy Year 2017 | NJI   | 10  | MWh           | 45,000<br>[37,500]              | 45,000<br>[ <del>37,500</del> ] | 45,000 [ <del>37,500</del> ]        | NPS   |   | 25        |
| 18.D.015 | New Jersey Solar<br>Renewable Energy<br>Certificate Future -<br>Energy Year 2018 | NJJ   | 10  | MWh           | 45,000<br>[ <del>37,500</del> ] | 45,000<br>[ <del>37,500</del> ] | 45,000 [3 <del>7,500</del> ]        | NPS   |   | 25        |
| 18.D.015 | New Jersey Solar<br>Renewable Energy<br>Certificate Future -<br>Energy Year 2019 | NJK   | 10  | MWh           | 45,000<br>[ <del>37,500</del> ] | 45,000<br>[ <del>37,500</del> ] | 45,000 [37,500]                     | NPS   |   | 25        |
|          | New Jersey Solar<br>Renewable Energy<br>Certificate Future -                     |       |     |               | 45,000                          | 45,000                          |                                     |       |   |           |
| 18.D.015 | Energy Year 2020  New Jersey Solar Renewable Energy Certificate Future -         | NJL   | 10  | MWh           | [ <del>37,500</del> ]<br>45,000 | [ <del>37,500</del> ]<br>45,000 | 45,000 [ <del>37,500</del> ]        | NPS   |   | 25        |
| 18.D.015 | Energy Year 2021                                                                 | NJ1   | 10  | MWh           | [37,500]                        | [ <del>37,500</del> ]           | <u>45,000</u> [ <del>37,500</del> ] | NPS   |   | 25        |

|                 | New Jersey Solar<br>Renewable Energy                |            |           |            |                       |                                        |                                     |            |          |           |
|-----------------|-----------------------------------------------------|------------|-----------|------------|-----------------------|----------------------------------------|-------------------------------------|------------|----------|-----------|
|                 | Certificate Future -                                |            |           |            | 45,000                | 45,000                                 |                                     |            |          |           |
| 18.D.015        | Energy Year 2022                                    | NJ2        | 10        | MWh        | [37,500]              | [ <del>37,500</del> ]                  | <u>45,000</u> [ <del>37,500</del> ] | NPS        |          | 25        |
|                 | New Jersey Solar                                    |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Renewable Energy                                    |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Certificate Future -                                |            |           |            | 45,000                | 45,000                                 |                                     |            |          |           |
| 18.D.015        | Energy Year 2023                                    | NJ3        | 10        | MWh        | [ <del>37,500</del> ] | [ <del>37,500</del> ]                  | <u>45,000</u> [ <del>37,500</del> ] | NPS        |          | 25        |
|                 | New Jersey Solar<br>Renewable Energy                |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Certificate Prior Year                              |            |           | MWh of     |                       |                                        |                                     |            |          |           |
| 18.D.042        | Future                                              | NPR        | <u>10</u> | SREC       | 45,000                | 45,000                                 | 45,000                              | NPR        |          | 25        |
| 10.D.042        | New Jersey Solar                                    | IVI        | 10        | ORLO       | 40,000                | <del>40,000</del>                      | 40,000                              | INI        |          | 20        |
|                 | Renewable Energy                                    |            |           | MWh of     |                       |                                        |                                     |            |          |           |
| 18.D.043        | Certificate Future                                  | NPS        | <u>10</u> | SREC       | 45,000                | 45,000                                 | <u>45,000</u>                       | NPS        | _        | <u>25</u> |
|                 | Option on New Jersey                                |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Solar Renewable                                     |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Energy Certificate                                  |            |           |            |                       |                                        |                                     |            |          |           |
| <u>18.E.085</u> | <u>Future</u>                                       | <u>NPS</u> | <u>10</u> | <u>MWh</u> | <u>45,000</u>         | <u>45,000</u>                          | <u>45,000</u>                       | <u>NPS</u> | _        | <u>25</u> |
|                 | One Year Mid-Curve                                  |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Option on New Jersey<br>Solar Renewable             |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Energy Certificate                                  |            |           |            |                       |                                        |                                     |            |          |           |
| 18.E.086        | Future                                              | NPP        | 10        | MWh        | 45,000                | 45,000                                 | 45,000                              | NPS        |          | 25        |
|                 | Two Year Mid-Curve                                  |            |           |            |                       |                                        |                                     |            | _        |           |
|                 | Option on New Jersey                                |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Solar Renewable                                     |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Energy Certificate                                  |            |           |            |                       |                                        |                                     |            |          |           |
| 18.E.087        | <u>Future</u>                                       | <u>NPQ</u> | <u>10</u> | <u>MWh</u> | <u>45,000</u>         | <u>45,000</u>                          | <u>45,000</u>                       | <u>NPS</u> | <u>-</u> | <u>25</u> |
|                 | Pennsylvania                                        |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Compliance Alternative Energy Certificate Tier 1    |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Vintage Future -                                    |            |           | MWh of     | 57,500                | 57,500                                 |                                     |            |          |           |
| 18.D.031        | Vintage 2016                                        | PC6        | 100       | REC        | <u>30,000</u>         | <u>37,300</u><br>[ <del>30,000</del> ] | <u>57,500</u> [ <del>30,000</del> ] | PAR        |          | 25        |
| 10.2.001        | Pennsylvania                                        |            | 100       |            | [50,000]              | [00,000]                               | <u>5. 1000</u> [00,000]             | 1743       |          |           |
|                 | Compliance Alternative                              |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Energy Certificate Tier 1                           |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Vintage Future -                                    |            |           | MWh of     | <u>57,500</u>         | <u>57,500</u>                          |                                     |            |          |           |
| 18.D.031        | Vintage 2017                                        | PC7        | 100       | REC        | [ <del>30,000</del> ] | [ <del>30,000</del> ]                  | <u>57,500</u> [ <del>30,000</del> ] | PAR        |          | 25        |
|                 | Pennsylvania                                        |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Compliance Alternative<br>Energy Certificate Tier 1 |            |           |            |                       |                                        |                                     |            |          |           |
|                 | Vintage Future -                                    |            |           | MWh of     | <u>57,500</u>         | <u>57,500</u>                          |                                     |            |          |           |
| 18.D.031        | Vintage 2018                                        | PC8        | 100       | REC        | [ <del>30,000</del> ] | <u>37,300</u><br>[ <del>30,000</del> ] | 57,500 [ <del>30,000</del> ]        | PAR        |          | 25        |
| 10.0.001        | VIII.ago 2010                                       | 1 00       | 100       | INLO       | [00,000]              | [00,000]                               | <u>01,000</u> [ <del>00,000</del> ] | LIMA       |          | 20        |

|          | Pennsylvania<br>Compliance Alternative   |      |            |                |                                        |                                        |                                     |      |   |            |
|----------|------------------------------------------|------|------------|----------------|----------------------------------------|----------------------------------------|-------------------------------------|------|---|------------|
|          | Energy Certificate Tier 1                |      |            |                |                                        |                                        |                                     |      |   |            |
| 40 D 004 | Vintage Future -                         | PC9  | 400        | MWh of         | <u>57,500</u><br>[ <del>30,000</del> ] | <u>57,500</u><br>[ <del>30,000</del> ] | 57 500 [20 000]                     | DAD  |   | 25         |
| 18.D.031 | Vintage 2019 Pennsylvania                | PC9  | 100        | REC            | [ <del>30,000</del> ]                  | [ <del>30,000</del> ]                  | <u>57,500</u> [ <del>30,000</del> ] | PAR  |   | 25         |
|          | Compliance Alternative                   |      |            |                |                                        |                                        |                                     |      |   |            |
|          | Energy Certificate Tier 1                |      |            |                |                                        |                                        |                                     |      |   |            |
| 40.0004  | Vintage Future -                         | DO0  | 400        | MWh of         | <u>57,500</u>                          | <u>57,500</u>                          | 57 500 [00 000]                     | DAD  |   | 0.5        |
| 18.D.031 | Vintage 2020<br>Pennsylvania             | PC0  | 100        | REC            | [30,000]                               | [30,000]                               | <u>57,500</u> [ <del>30,000</del> ] | PAR  |   | 25         |
|          | Compliance Alternative                   |      |            |                |                                        |                                        |                                     |      |   |            |
|          | Energy Certificate Tier 1                |      |            |                |                                        |                                        |                                     |      |   |            |
| 18.D.031 | Vintage Future -<br>Vintage 2021         | PC1  | 100        | MWh of<br>REC  | 57,500<br>[ <del>30,000</del> ]        | <u>57,500</u><br>[ <del>30,000</del> ] | 57,500 [ <del>30,000</del> ]        | PAR  |   | 25         |
| 16.0.031 | Pennsylvania                             | PCI  | 100        | REC            | [ <del>30,000</del> ]                  | [ <del>30,000</del> ]                  | <u>57,500</u> [ <del>30,000</del> ] | PAR  |   | 25         |
|          | Compliance Alternative                   |      |            |                |                                        |                                        |                                     |      |   |            |
|          | Energy Certificate Tier 1                |      |            |                |                                        |                                        |                                     |      |   |            |
| 18.D.031 | Vintage Future -<br>Vintage 2022         | PC2  | 100        | MWh of<br>REC  | <u>57,500</u><br>[ <del>30,000</del> ] | <u>57,500</u><br>[ <del>30,000</del> ] | 57,500 [ <del>30,000</del> ]        | PAR  |   | 25         |
| 16.0.031 | Pennsylvania                             | PU2  | 100        | REC            | [ <del>30,000</del> ]                  | [ <del>30,000</del> ]                  | <u>57,500</u> [ <del>50,000</del> ] | FAR  |   | 25         |
|          | Compliance Alternative                   |      |            |                |                                        |                                        |                                     |      |   |            |
|          | Energy Certificate Tier 1                |      |            |                |                                        |                                        |                                     |      |   |            |
| 18.D.031 | Vintage Future -<br>Vintage 2023         | PC3  | 100        | MWh of<br>REC  | 57,500<br>[30,000]                     | <u>57,500</u><br>[ <del>30,000</del> ] | <u>57,500</u> [ <del>30,000</del> ] | PAR  |   | 25         |
| 10.0.001 | Pennsylvania                             | 1 00 | 100        | I I I          | [00,000]                               | [00,000]                               | <u>57,500</u> [ <del>60,500</del> ] | 1741 |   | 20         |
|          | Compliance Alternative                   |      |            |                |                                        |                                        |                                     |      |   |            |
| 18.D.036 | Energy Credit Tier I Future              | PAR  | 100        | MWh of<br>REC  | E7 E00                                 | F7 F00                                 | F7 F00                              | PAR  |   | 25         |
| 16.D.036 | Pennsylvania Solar                       | PAR  | <u>100</u> | REC            | <u>57,500</u>                          | <u>57,500</u>                          | <u>57,500</u>                       | PAR  | _ | <u> 25</u> |
|          | Alternative Energy                       |      |            |                |                                        |                                        |                                     |      |   |            |
|          | Certificate Future -                     |      |            | MWh of         | 24,000                                 | 24,000                                 |                                     |      |   |            |
| 18.D.025 | Vintage 2016 Pennsylvania Solar          | PA6  | 10         | SREC           | [ <del>10,000</del> ]                  | [ <del>10,000</del> ]                  | <u>24,000</u> [ <del>10,000</del> ] | PAX  |   | 25         |
|          | Alternative Energy                       |      |            |                |                                        |                                        |                                     |      |   |            |
|          | Certificate Future -                     |      |            | MWh of         | 24,000                                 | 24,000                                 |                                     |      |   |            |
| 18.D.025 | Vintage 2017                             | PA7  | 10         | SREC           | [ <del>10,000</del> ]                  | [10,000]                               | <u>24,000</u> [ <del>10,000</del> ] | PAX  |   | 25         |
|          | Pennsylvania Solar<br>Alternative Energy |      |            |                |                                        |                                        |                                     |      |   |            |
|          | Certificate Future -                     |      |            | MWh of         | 24,000                                 | 24,000                                 |                                     |      |   |            |
| 18.D.025 | Vintage 2018                             | PA8  | 10         | SREC           | [ <del>10,000</del> ]                  | [ <del>10,000</del> ]                  | <u>24,000</u> [ <del>10,000</del> ] | PAX  |   | 25         |
|          | Pennsylvania Solar                       |      |            |                | 0.4.555                                | 0.4.555                                |                                     |      |   |            |
| 18.D.025 | Alternative Energy Certificate Future -  | PA9  | 10         | MWh of<br>SREC | 24,000<br>[ <del>10,000</del> ]        | <u>24,000</u><br>[ <del>10,000</del> ] | 24,000 [ <del>10,000</del> ]        | PAX  |   | 25         |
| 10.0.023 | Certificate Future -                     | ΓAΘ  | 10         | SNEU           | [ <del>10,000</del> ]                  | [ <del>10,000</del> ]                  | <u>24,000</u> [ <del>10,000</del> ] | ΓMΛ  |   | 20         |

|          | Vintage 2019                                                                                |             |           |                |                                 |                                            |                                     |            |   |           |
|----------|---------------------------------------------------------------------------------------------|-------------|-----------|----------------|---------------------------------|--------------------------------------------|-------------------------------------|------------|---|-----------|
| 40 D 005 | Pennsylvania Solar<br>Alternative Energy<br>Certificate Future -                            | <b>D</b> 10 | 40        | MWh of         | 24,000                          | 24,000                                     | 04 000 440 000                      | DAY        |   | 0.5       |
| 18.D.025 | Vintage 2020<br>Pennsylvania Solar                                                          | PA0         | 10        | SREC           | [ <del>10,000</del> ]           | [ <del>10,000</del> ]                      | <u>24,000</u> [ <del>10,000</del> ] | PAX        |   | 25        |
|          | Alternative Energy<br>Certificate Future -                                                  |             |           | MWh of         | 24,000                          | 24,000                                     |                                     |            |   |           |
| 18.D.025 | Vintage 2021                                                                                | PA1         | 10        | SREC           | [ <del>10,000</del> ]           | [ <del>10,000</del> ]                      | <u>24,000</u> [ <del>10,000</del> ] | PAX        |   | 25        |
| 18.D.025 | Pennsylvania Solar<br>Alternative Energy<br>Certificate Future -<br>Vintage 2022            | PA2         | 10        | MWh of<br>SREC | 24,000<br>[ <del>10,000</del> ] | 24,000<br>[ <del>10,000</del> ]            | <u>24,000</u> [ <del>10,000</del> ] | PAX        |   | 25        |
|          | Pennsylvania Solar<br>Alternative Energy<br>Certificate Future -                            |             |           | MWh of         | <u>24,000</u>                   | <u>24,000</u>                              |                                     |            |   |           |
| 18.D.025 | Vintage 2023                                                                                | PA3         | 10        | SREC           | [ <del>10,000</del> ]           | [ <del>10,000</del> ]                      | <u>24,000</u> [ <del>10,000</del> ] | PAX        |   | 25        |
| 18.D.038 | Pennsylvania Solar Alternative Energy Credit Future                                         | <u>PAX</u>  | <u>10</u> | MWh of SREC    | <u>24,000</u>                   | <u>24,000</u>                              | <u>24,000</u>                       | <u>PAX</u> | _ | <u>25</u> |
|          | PJM Tri-Qualified<br>Renewable Energy<br>Certificate Class 1                                |             |           |                | 42,500                          | 42,500                                     |                                     |            |   |           |
| 18.D.020 | Future - Vintage 2015                                                                       | TQA         | 100       | MWh            | [ <del>5,000</del> ]            | [ <del>5,000</del> ]                       | <u>42,500</u> [ <del>5,000</del> ]  | PPR        |   | 25        |
| 18.D.020 | PJM Tri-Qualified<br>Renewable Energy<br>Certificate Class 1<br>Future - Vintage 2016       | TQB         | 100       | MWh            | 42,500<br>[ <del>30,000</del> ] | 42,500<br>[ <del>30,000</del> ]            | 42,500 [ <del>30,000</del> ]        | PPR        |   | 25        |
|          | PJM Tri-Qualified Renewable Energy Certificate Class 1                                      |             | 100       |                | 42,500                          | 42,500                                     |                                     |            |   |           |
| 18.D.020 | Future - Vintage 2017                                                                       | TQC         | 100       | MWh            | [30,000]                        | [ <del>30,000</del> ]                      | <u>42,500</u> [ <del>30,000</del> ] | PPR        |   | 25        |
|          | Option on PJM Tri-<br>Qualified Renewable<br>Energy Certificate Class<br>1 Vintage Future - |             |           |                | 42,500                          | 42,500                                     |                                     |            |   |           |
| 18.E.073 | Vintage 2017                                                                                | TQC         | 100       | MWh            | [30,000]                        | [ <del>30,000</del> ]                      | <u>42,500</u> [ <del>30,000</del> ] | PPR        |   | 25        |
|          | PJM Tri-Qualified<br>Renewable Energy<br>Certificate Class 1                                |             |           |                | 42,500                          | 42,500                                     |                                     |            |   |           |
| 18.D.020 | Future - Vintage 2018                                                                       | TQD         | 100       | MWh            | [ <del>30,000</del> ]           | <del>42,500</del><br>[ <del>30,000</del> ] | <u>42,500</u> [ <del>30,000</del> ] | PPR        |   | 25        |

|          | Option on PJM Tri-<br>Qualified Renewable<br>Energy Certificate Class |      |     |           |                                 |                                        |                                     |      |     |
|----------|-----------------------------------------------------------------------|------|-----|-----------|---------------------------------|----------------------------------------|-------------------------------------|------|-----|
| 40 5 050 | 1 Vintage Future -                                                    | T0.D | 400 |           | 42,500                          | 42,500                                 | 40 500 100 0001                     | 222  | 0.5 |
| 18.E.073 | Vintage 2018 PJM Tri-Qualified                                        | TQD  | 100 | MWh       | [ <del>30,000</del> ]           | [ <del>30,000</del> ]                  | <u>42,500</u> [ <del>30,000</del> ] | PPR  | 25  |
|          | Renewable Energy                                                      |      |     |           |                                 |                                        |                                     |      |     |
|          | Certificate Class 1                                                   |      |     |           | 42,500                          | 42,500                                 |                                     |      |     |
| 18.D.020 | Future - Vintage 2019                                                 | TQE  | 100 | MWh       | [ <del>30,000</del> ]           | [ <del>30,000</del> ]                  | <u>42,500</u> [ <del>30,000</del> ] | PPR  | 25  |
|          | Option on PJM Tri-                                                    |      |     |           |                                 |                                        |                                     |      |     |
|          | Qualified Renewable<br>Energy Certificate Class                       |      |     |           |                                 |                                        |                                     |      |     |
|          | 1 Vintage Future -                                                    |      |     |           | 42,500                          | 42,500                                 |                                     |      |     |
| 18.E.073 | Vintage 2019                                                          | TQE  | 100 | MWh       | [ <del>30,000</del> ]           | [ <del>30,000</del> ]                  | <u>42,500</u> [ <del>30,000</del> ] | PPR  | 25  |
|          | PJM Tri-Qualified                                                     |      |     |           |                                 |                                        |                                     |      |     |
|          | Renewable Energy<br>Certificate Class 1                               |      |     |           | 42,500                          | 42,500                                 |                                     |      |     |
| 18.D.020 | Future - Vintage 2020                                                 | TQF  | 100 | MWh       | [ <del>30,000</del> ]           | [ <del>30,000</del> ]                  | 42,500 [ <del>30,000</del> ]        | PPR  | 25  |
| 10.2.020 | Option on PJM Tri-                                                    |      |     |           | [00,000]                        | [00,000]                               | <u>.=,000</u> [00,000]              |      |     |
|          | Qualified Renewable                                                   |      |     |           |                                 |                                        |                                     |      |     |
|          | Energy Certificate Class                                              |      |     |           | 40.500                          | 40.500                                 |                                     |      |     |
| 18.E.073 | 1 Vintage Future -<br>Vintage 2020                                    | TQF  | 100 | MWh       | 42,500<br>[ <del>30,000</del> ] | <u>42,500</u><br>[ <del>30,000</del> ] | <u>42,500</u> [ <del>30,000</del> ] | PPR  | 25  |
| 10.L.073 | PJM Tri-Qualified                                                     | IQI  | 100 | 1010 0 11 | [ <del>50,000</del> ]           | [ <del>00,000</del> ]                  | <u>42,300</u> [ <del>30,000</del> ] | TTIX | 23  |
|          | Renewable Energy                                                      |      |     |           |                                 |                                        |                                     |      |     |
|          | Certificate Class 1                                                   |      |     |           | 42,500                          | 42,500                                 |                                     |      |     |
| 18.D.020 | Future - Vintage 2021                                                 | TQG  | 100 | MWh       | [30,000]                        | [30,000]                               | <u>42,500</u> [ <del>30,000</del> ] | PPR  | 25  |
|          | Option on PJM Tri-<br>Qualified Renewable                             |      |     |           |                                 |                                        |                                     |      |     |
|          | Energy Certificate Class                                              |      |     |           |                                 |                                        |                                     |      |     |
|          | 1 Vintage Future -                                                    |      |     |           | 42,500                          | 42,500                                 |                                     |      |     |
| 18.E.073 | Vintage 2021                                                          | TQG  | 100 | MWh       | [30,000]                        | [30,000]                               | <u>42,500</u> [ <del>30,000</del> ] | PPR  | 25  |
|          | PJM Tri-Qualified                                                     |      |     |           |                                 |                                        |                                     |      |     |
|          | Renewable Energy<br>Certificate Class 1                               |      |     |           |                                 |                                        |                                     |      |     |
|          | Vintage Future -                                                      |      |     |           | 42,500                          | 42.500                                 |                                     |      |     |
| 18.D.020 | Vintage 2022                                                          | TQH  | 100 | MWh       | [30,000]                        | [ <del>30,000</del> ]                  | <u>42,500</u> [ <del>30,000</del> ] | PPR  | 25  |
|          | Option on PJM Tri-                                                    |      |     |           |                                 |                                        |                                     |      |     |
|          | Qualified Renewable                                                   |      |     |           |                                 |                                        |                                     |      |     |
|          | Energy Certificate Class 1 Vintage Future -                           |      |     |           | 42,500                          | 42,500                                 |                                     |      |     |
| 18.E.073 | Vintage 2022                                                          | TQH  | 100 | MWh       | [ <del>30,000</del> ]           | [ <del>30,000</del> ]                  | <u>42,500</u> [ <del>30,000</del> ] | PPR  | 25  |
|          | PJM Tri-Qualified                                                     |      |     |           | 42,500                          | 42,500                                 |                                     |      |     |
| 18.D.020 | Renewable Energy                                                      | TQI  | 100 | MWh       | [30,000]                        | [ <del>30,000</del> ]                  | <u>42,500</u> [ <del>30,000</del> ] | PPR  | 25  |

|          | Certificate Class 1 Vintage Future - Vintage 2023                                           |            |            |            |                       |                       |                                     |            |   |           |
|----------|---------------------------------------------------------------------------------------------|------------|------------|------------|-----------------------|-----------------------|-------------------------------------|------------|---|-----------|
| 18.E.073 | Option on PJM Tri-<br>Qualified Renewable<br>Energy Certificate Class<br>1 Vintage Future - | TQI        | 100        | MWh        | 42,500                | 42,500                | 42 500 [20 000]                     | PPR        |   | 25        |
| 16.E.073 | Vintage 2023  PJM Tri Qualified  Renewable Energy  Certificate Class I Prior                | TQI        | 100        | IVIVVII    | [ <del>30,000</del> ] | [ <del>30,000</del> ] | <u>42,500</u> [ <del>30,000</del> ] | PPK        |   | 25        |
| 18.D.044 | Year Future                                                                                 | PPY        | <u>100</u> | MWh        | 42,500                | 42,500                | 42,500                              | PPY        |   | 25        |
|          | PJM Tri Qualified Renewable Energy Certificate Class I                                      |            |            |            |                       |                       |                                     |            | _ | -         |
| 18.D.045 | <u>Future</u>                                                                               | <u>PPR</u> | <u>100</u> | <u>MWh</u> | 42,500                | <u>42,500</u>         | <u>42,500</u>                       | <u>PPR</u> | _ | <u>25</u> |
| 18.E.088 | Option on PJM Tri Qualified Renewable Energy Certificate Class I Future                     | <u>PPR</u> | <u>100</u> | <u>MWh</u> | <u>42,500</u>         | <u>42,500</u>         | <u>42,500</u>                       | <u>PPR</u> | _ | <u>25</u> |
|          | One Year Mid-Curve Option on PJM Tri Qualified Renewable Energy Certificates                |            |            |            |                       |                       |                                     |            |   |           |
| 18.E.089 | Class I Future                                                                              | <u>PPS</u> | <u>100</u> | <u>MWh</u> | <u>42,500</u>         | <u>42,500</u>         | <u>42,500</u>                       | <u>PPR</u> | _ | <u>25</u> |
|          | Two Year Mid-Curve Option on PJM Tri Qualified Renewable Energy Certificates                |            |            |            |                       |                       |                                     |            |   |           |
| 18.E.090 | Class I Future                                                                              | <u>PPT</u> | <u>100</u> | <u>MWh</u> | <u>42,500</u>         | <u>42,500</u>         | <u>42,500</u>                       | <u>PPR</u> |   | <u>25</u> |

# <u>Subchapter 18D – Physical Environmental</u> <u>Futures Contracts</u>

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### 18.D.032 Massachusetts Solar Renewable Energy Certificate Carve Out I Future

<u>Contract Description:</u> Physically delivered Massachusetts Solar Renewable Energy Certificates ("Massachusetts SREC I") where a Massachusetts SREC I is an electronic certificate issued by NEPOOL GIS for qualifying generation.

**Contract Symbol:** MSF

**Settlement Method:** Physical Delivery

**Contract Size:** 10 MWh representing 10 Qualifying SRECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

**Listing Cycle:** 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

<u>Peliverable Instruments:</u> Massachusetts SRECs eligible for delivery are those representing solar renewable energy (defined in Massachusetts General Law c.25A, 11F(c)) eligible to meet the Solar Carve Out Program (SREC I) requirement of the Renewable Energy Portfolio Standard promulgated under Massachusetts General Law c.25A 11F and issued by NEPOOL GIS having a vintage year designation that corresponds to the specified vintage of the expiring contract.

### 18.D.033 Massachusetts Solar Renewable Energy Certificate Carve Out II Future

Contract Description: Physically delivered Massachusetts Solar Renewable Energy Certificates ("Massachusetts SREC II") where a Massachusetts SREC II is an electronic certificate issued by NEPOOL GIS for qualifying generation.

**Contract Symbol:** MS2

**Settlement Method:** Physical Delivery

Contract Size: 10 MWh representing 10 Qualifying SRECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

**Listing Cycle:** 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

Deliverable Instruments: Massachusetts SRECs eligible for delivery are those representing solar renewable energy (defined in Massachusetts General Law c.25A, 11F(c)) eligible to meet the Solar Carve Out Program (SREC II) requirement of the Renewable Energy Portfolio Standard promulgated under Massachusetts General Law c.25A 11F and issued by NEPOOL GIS having a vintage year designation that corresponds to the specified vintage of the expiring contract.

### 18.D.034 New Jersey Compliance Renewable Energy Certificate Class I Future

Contract Description: Physically delivered New Jersey Class I Renewable Energy Certificates ("New Jersey Class I REC") where a New Jersey Class I REC is an electronic certificate issued by the PJM Environmental Information System Generation Attribute Tracking System ("PJM GATS") for qualifying generation.

Contract Symbol: NJN

**Settlement Method:** Physical Delivery

**Contract Size:** 100 MWh representing 100 Class I RECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

**Listing Cycle:** 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

> 2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December.

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

**Deliverable Instruments:** New Jersey Class I RECs eligible for delivery are those which are eligible to meet the Class I Renewable Energy minimum requirements specified in N.J.A.C. 14:8-2-3 under the New Jersey Renewable Energy Portfolio Standard promulgated under N.J.A.C. 14:8 verified and qualified by the NJ Board of Public Utilities having a vintage year designation that corresponds to the specified vintage of the expiring contract.

### 18.D.035 Maryland Compliance Renewable Energy Credit Tier 1 Future

Contract Description: Physically delivered Maryland Tier 1 Renewable Energy Credit ("Maryland Tier 1 REC") where a Maryland Tier 1 REC is an electronic certificate issued by PJM GATS for qualifying generation.

**Contract Symbol: MDE** 

**Settlement Method:** Physical Delivery

Contract Size: 100 MWh representing 100 Tier 1 RECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

Deliverable Instruments: Maryland Tier 1 RECs eligible for delivery are those which are eligible to meet the Tier 1 renewable energy requirement (as defined in the Maryland Renewable Energy Portfolio Standard promulgated under 7-701 of the Public Utilities Article of the Annotated Code of Maryland and issued by PJM GATS having a vintage year designation that corresponds to the specified vintage of the expiring contract.

### 18.D.036 Pennsylvania Compliance Alternative Energy Credit Tier I Future

<u>Contract Description:</u> Physically delivered Pennsylvania Tier I Alternative Energy Credit ("Pennsylvania Tier I REC") where a Pennsylvania Tier I REC is an electronic certificate issued by PJM GATS for qualifying generation.

**Contract Symbol: PAR** 

**Settlement Method:** Physical Delivery

Contract Size: 100 MWh representing 100 Tier I RECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

<u>Deliverable Instruments:</u> Pennsylvania Tier I RECs eligible for delivery are those which are eligible to meet the Tier 1 renewable energy requirement in the state of Pennsylvania. The requirements are specified in Pennsylvania Statues Title 73 Chapter 18F and issued by PJM GATS having a vintage year designation that corresponds to the specified vintage of the expiring contract.

### 18.D.037 Maryland Solar Renewable Energy Credit Future

Contract Description: Physically delivered Maryland Solar Renewable Energy Credit ("Maryland SREC") where a Maryland SREC is an electronic certificate issued by PJM GATS for qualifying generation.

**Contract Symbol:** MDX

**Settlement Method:** Physical Delivery

Contract Size: 10 MWh representing 10 qualifying SRECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

**Listing Cycle:** 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

Deliverable Instruments: Maryland SRECs eligible for delivery are those representing solar photovoltaic sources eligible to meet the Solar Carve Out requirement of the Maryland Renewable Energy Portfolio Standard promulgated under 7-701 of the Public Utilities Article of the Annotated Code of Maryland and issued by PJM GATS having a vintage year designation that corresponds to the specified vintage of the expiring contract.

### 18.D.038 Pennsylvania Solar Alternative Energy Credit Future

<u>Contract Description:</u> Physically delivered Pennsylvania Solar Alternative Energy Credit ("Pennsylvania SREC") where a Pennsylvania SREC is an electronic certificate issued by PJM GATS for qualifying generation.

**Contract Symbol:** PAX

**Settlement Method:** Physical Delivery

Contract Size: 10 MWh representing 10 qualifying SRECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

Deliverable Instruments: Pennsylvania SREC eligible for delivery are those representing solar photovoltaic sources eligible to meet the Tier I Alternative Energy Credit requirement of the Alternative Energy Portfolio Standard promulgated under Pennsylvania 2004 Act 213 P.L. 1672 No. 213 and issued by PJM GATS having a vintage year designation that corresponds to the specified vintage of the expiring contract.

### 18.D.039 Connecticut Compliance Renewable Energy Certificate Class I Future

<u>Contract Description:</u> Physically delivered Connecticut Class I Renewable Energy Certificates ("Connecticut Class I REC") where a Connecticut Class I REC is an electronic certificate issued by the NEPOOL GIS for qualifying generation.

**Contract Symbol: CTT** 

**Settlement Method:** Physical Delivery

Contract Size: 100 MWh representing 100 Class I RECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

Deliverable Instruments: Connecticut Class I RECs eligible for delivery are those representing Class I renewable energy (defined in General Statutes of Connecticut, Title 16, c. 277, §16-1(26)) eligible to meet Class I requirement of the Renewable Energy Portfolio Standard promulgated under General Statutes of Connecticut (Title 16, c. 283, §16-245a) and issued by NEPOOL GIS having a vintage year designation that corresponds to the specified vintage of the expiring contract.

### 18.D.040 Massachusetts Compliance Renewable Energy Certificate Class I Future

<u>Contract Description:</u> Physically delivered Massachusetts Class I Renewable Energy Certificates ("Massachusetts Class I REC") where a Massachusetts Class I REC is an electronic certificate issued by NEPOOL GIS for qualifying generation.

**Contract Symbol:** MCL

**Settlement Method:** Physical Delivery

Contract Size: 100 MWh representing 100 Class I RECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

**Listing Cycle:** 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

Deliverable Instruments: Massachusetts Class 1 RECs eligible for delivery are those representing Class 1 renewable energy (defined in Massachusetts General Law c.25A, 11F(c)) eligible to meet the Class I requirement of the Renewable Energy Portfolio Standard promulgated under Massachusetts General Law c.25A 11F and issued by NEPOOL GIS having a vintage year designation that corresponds to the specified vintage of the expiring contract..

### 18.D.041 NEPOOL Dual Qualified Compliance Renewable Energy Certificate Class I Future

Contract Description: Physically delivered Class I Renewable Energy Certificates ("NEPOOL Class I REC") where a NEPOOL Class I REC is an electronic certificate issued by the NEPOOL GIS system for generation simultaneously qualifying for the Massachusetts Class I and Connecticut Class I portions of the Renewable Portfolio Standard programs.

**Contract Symbol: NER** 

**Settlement Method:** Physical Delivery

**Contract Size:** 100 MWh representing 100 Class I RECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

**Listing Cycle:** 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

<u>Deliverable Instruments:</u> RECs eligible for delivery are those that simultaneously qualify in Massachusetts and Connecticut as specified.

Massachusetts Class I RECs eligible for delivery are those representing Class I renewable energy (defined in Massachusetts General Law c.25A, 11F(c)) eligible to meet the Class I requirement of the Renewable Energy Portfolio Standard promulgated under Massachusetts General Law c.25A 11F and issued by NEPOOL GIS having a vintage year designation that corresponds to the specified vintage of the expiring contract.

Connecticut Class I RECs eligible for delivery are those representing Class I renewable energy (defined in General Statutes of Connecticut, Title 16, c. 277, §16-1(26)) eligible to meet Class I requirement of the Renewable Energy Portfolio Standard promulgated under General Statutes of Connecticut (Title 16, c. 283, §16-245a) and issued by NEPOOL GIS having a vintage year designation that corresponds to the specified vintage of the expiring contract.

#### 18.D.042 New Jersey Solar Renewable Energy Certificate Prior Year Future

<u>Contract Description:</u> Physically delivered New Jersey Solar Renewable Energy Certificates ("New Jersey SREC") where a New Jersey SREC is an electronic certificate issued by the PJM Environmental Information System Generation Attribute Tracking System ("PJM GATS") for qualifying generation.

**Contract Symbol:** NPR

**Settlement Method:** Physical Delivery

Contract Size: 10 MWh representing 10 SRECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

<u>Deliverable Instruments:</u> New Jersey SRECs eligible for delivery are those which are eligible to meet the SREC requirements specified in N.J.A.C. 14:8-2-3 under the New Jersey Renewable Energy Portfolio Standard promulgated under N.J.A.C. 14:8 verified and qualified by the NJ Board of Public Utilities having a vintage year designation that corresponds to the specified vintage of the expiring contract.

**Registry:** PJM GATS

#### 18.D.043 New Jersey Solar Renewable Energy Certificate Future

<u>Contract Description:</u> Physically delivered New Jersey Solar Renewable Energy Certificates ("New Jersey SREC") where a SREC is an electronic certificate issued by the PJM Environmental Information System Generation Attribute Tracking System ("PJM GATS") for qualifying generation.

**Contract Symbol:** NPS

**Settlement Method:** Physical Delivery

**Contract Size:** 10 MWh representing 10 New Jersey SRECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

<u>Deliverable Instruments:</u> New Jersey SRECs eligible for delivery are those which are eligible to meet the SREC requirements specified in N.J.A.C. 14:8-2-3 under the New Jersey Renewable Energy Portfolio Standard promulgated under N.J.A.C. 14:8 verified and qualified by the NJ Board of Public Utilities having a vintage year designation that corresponds to the specified vintage of the expiring contract.

**Registry:** PJM GATS

#### 18.D.044 PJM Tri Qualified Renewable Energy Certificate Class I Prior Year Future

Contract Description: Physically delivered Class I Renewable Energy Certificates, Tier 1 Renewable Energy Credits and Tier I Alternative Energy Credits ("Class I REC") where a Class I REC is an electronic certificate issued by the PJM Environmental Information System Generation Attribute Tracking System ("PJM GATS") for generation simultaneously qualifying for the respective portions of the Pennsylvania, New Jersey and Maryland renewable portfolio standard programs.

**Contract Symbol:** PPY

**Settlement Method:** Physical Delivery

Contract Size: 100 MWh representing 100 Qualifying Class 1 RECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

<u>2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December</u>

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

Deliverable Instruments: Class I RECs eligible for delivery are those which are eligible to meet the Class I or Tier 1/I requirements in each of the states of Pennsylvania, New Jersey and Maryland where; the Pennsylvania requirements are specified in Pennsylvania Statutes Title 73 Chapter 18F; the New Jersey requirements are specified in N.J.A.C. 14:8-2-3; and the Maryland requirements are specified in Maryland Annotated Code, Public Utility Companies Article, § 7-701 – 7-713 and in the Code of Maryland Regulations as implemented through Title 20, Subtitle 61.

Class 1 RECs acceptable for delivery are those having a vintage year designation that corresponds to the specified vintage year of the expiring contract. Applicable to the Maryland vintage-year designation only and only for the expiry months of January through July, sellers have the option to deliver a vintage designation that corresponds to the specified vintage year of the expiring contract or one that is one year earlier.

**Registry:** PJM GATS

#### 18.D.045 PJM Tri Qualified Renewable Energy Certificate Class I Future

Contract Description: Physically delivered Class I Renewable Energy Certificates, Tier 1 Renewable Energy Credits and Tier I Alternative Energy Credits ("Class I REC") where a Class I REC is an electronic certificate issued by the PJM Environmental Information System Generation Attribute Tracking System ("PJM GATS") for generation simultaneously qualifying for the respective portions of the Pennsylvania, New Jersey and Maryland renewable portfolio standard programs.

**Contract Symbol: PPR** 

**Settlement Method:** Physical Delivery

Contract Size: 100 MWh representing 100 Qualifying Class 1 RECs

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

**Last Trading Day:** Three Business Days prior to the last Business Day of the delivery month.

Deliverable Instruments: Class I RECs eligible for delivery are those which are eligible to meet the Class I or Tier 1/I requirements in each of the states of Pennsylvania, New Jersey and Maryland where; the Pennsylvania requirements are specified in Pennsylvania Statutes Title 73 Chapter 18F; the New Jersey requirements are specified in N.J.A.C. 14:8-2-3; and the Maryland requirements are specified in Maryland Annotated Code, Public Utility Companies Article, § 7-701 – 7-713 and in the Code of Maryland Regulations as implemented through Title 20, Subtitle 61.

Class 1 RECs acceptable for delivery are those having a vintage year designation that corresponds to the specified vintage year of the expiring contract. Applicable to the Maryland vintage-year designation only and only for the expiry months of January through July, sellers have the option to deliver a vintage designation that corresponds to the specified vintage year of the expiring contract or one that is one year earlier.

**Registry:** PJM Gats

#### **Subchapter 18E – Energy Options Contracts**

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#### 18.E.085 Option on New Jersey Solar Renewable Energy Certificate Future

<u>Contract Description:</u> The Options Contract is an option on the New Jersey Solar Renewable Energy Certificate Futures Contract. At expiry, one lot of Options will exercise into one lot of Futures with the corresponding strip.

**Contract Symbol:** NPS

**Settlement Method:** Exercise into Underlying Futures Contract

Contract Size: 1 New Jersey Solar Renewable Energy Certificate Futures contract

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

Strike Price Intervals: A minimum of ten Strike Prices in increments of \$0.25 above and below the atthe-money Strike Price. Strike Price boundaries are adjusted according to futures price movements. Userdefined Strike Prices are allowed in \$0.25 increments.

<u>Last Trading Day:</u> At 4:00 pm EPT on the 15th calendar day of the delivery month. Where the 15th calendar day is not a Business Day, the Last Trading Day shall be the first Business Day following the 15th calendar day of the delivery month.

Option Style: European

Exercise Method: Automatic

**Exercise procedure:** Clearing Members shall provide exercise and abandon instructions to the Clearing Organization in accordance with the Clearing Organization rules

#### 18.E.086 One Year Mid-Curve Option on New Jersey Solar Renewable Energy Certificate Future

<u>Contract Description:</u> The Options Contract is an option on the New Jersey Solar Renewable Energy Certificate Futures Contract. At expiry, one lot of Options will exercise into one lot of Futures with a strip that is 1 year later.

**Contract Symbol: NPP** 

**Settlement Method:** Exercise into Underlying Futures Contract

Contract Size: 1 New Jersey Solar Renewable Energy Certificate Futures contract

**Currency:** USD

<u>Minimum Price Fluctuation:</u> The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

Strike Price Intervals: A minimum of ten Strike Prices in increments of \$0.25 above and below the atthe-money Strike Price. Strike Price boundaries are adjusted according to futures price movements. User-defined Strike Prices are allowed in \$0.25 increments.

<u>Last Trading Day:</u> At 4:00 pm EPT on the 15th calendar day of the delivery month. Where the 15th calendar day is not a Business Day, the Last Trading Day shall be the first Business Day following the 15th calendar day of the delivery month.

Option Style: European

**Exercise Method:** Automatic

**Exercise procedure:** Clearing Members shall provide exercise and abandon instructions to the Clearing Organization in accordance with the Clearing Organization rules

#### 18.E.087 Two Year Mid-Curve Option on New Jersey Solar Renewable Energy Certificate Future

<u>Contract Description:</u> The Options Contract is an option on the New Jersey Solar Renewable Energy Certificate Futures Contract. At expiry, one lot of Options will exercise into one lot of Futures with a strip that is 2 years later.

**Contract Symbol:** NPQ

**Settlement Method:** Exercise into Underlying Futures Contract

Contract Size: 1 New Jersey Solar Renewable Energy Certificate Futures contract

**Currency:** USD

<u>Minimum Price Fluctuation:</u> The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

Listing Cycle: 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

Strike Price Intervals: A minimum of ten Strike Prices in increments of \$0.25 above and below the atthe-money Strike Price. Strike Price boundaries are adjusted according to futures price movements. User-defined Strike Prices are allowed in \$0.25 increments.

<u>Last Trading Day:</u> At 4:00 pm EPT on the 15th calendar day of the delivery month. Where the 15th calendar day is not a Business Day, the Last Trading Day shall be the first Business Day following the 15th calendar day of the delivery month.

Option Style: European

**Exercise Method:** Automatic

**Exercise procedure:** Clearing Members shall provide exercise and abandon instructions to the Clearing Organization in accordance with the Clearing Organization rules

#### 18.E.088 Option on PJM Tri Qualified Renewable Energy Certificate Class I Future

<u>Contract Description:</u> The Options Contract is an option on the PJM Tri-Qualified Renewable Energy Certificate Class I Futures Contract. At expiry, one lot of Options will exercise into one lot of Futures with the corresponding strip.

**Contract Symbol: PPR** 

**Settlement Method:** Exercise into Underlying Futures Contract

Contract Size: 1 PJM Tri Qualified Renewable Energy Certificate contract

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

**Listing Cycle:** 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

Strike Price Intervals: A minimum of ten Strike Prices in increments of \$0.05 above and below the atthe-money Strike Price. Strike Price boundaries are adjusted according to futures price movements. User-defined Strike Prices are allowed in \$0.05 increments.

<u>Last Trading Day:</u> At 4:00 pm EPT on the 15th calendar day of the delivery month. Where the 15th calendar day is not a Business Day, the Last Trading Day shall be the first Business Day following the 15th calendar day of the delivery month.

Option Style: European

**Exercise Method:** Automatic

**Exercise procedure:** Clearing Members shall provide exercise and abandon instructions to the Clearing Organization in accordance with the Clearing Organization rules

## 18.E.089 One Year Mid-Curve Option on PJM Tri Qualified Renewable Energy Certificates Class I Future

Contract Description: The Options Contract is an option on the PJM Tri-Qualified Renewable Energy Certificate Class I Futures Contract. At expiry, one lot of Options will exercise into one lot of Futures with a strip that is 1 year later.

**Contract Symbol: PPS** 

**Settlement Method:** Exercise into Underlying Futures Contract

Contract Size: 1 PJM Tri Qualified Renewable Energy Certificate contract

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

**Listing Cycle:** 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December

Strike Price Intervals: A minimum of ten Strike Prices in increments of \$0.05 above and below the atthe-money Strike Price. Strike Price boundaries are adjusted according to futures price movements. Userdefined Strike Prices are allowed in \$0.05 increments.

<u>Last Trading Day:</u> At 4:00 pm EPT on the 15th calendar day of the delivery month. Where the 15th calendar day is not a Business Day, the Last Trading Day shall be the first Business Day following the 15th calendar day of the delivery month.

**Option Style:** European

**Exercise Method:** Automatic

**Exercise procedure:** Clearing Members shall provide exercise and abandon instructions to the Clearing Organization in accordance with the Clearing Organization rules

# 18.E.090 Two Year Mid-Curve Option on PJM Tri Qualified Renewable Energy Certificates Class I Future

Contract Description: The Options Contract is an option on the PJM Tri-Qualified Renewable Energy Certificate Class I Futures Contract. At expiry, one lot of Options will exercise into one lot of Futures with a strip that is 2 year later.

**Contract Symbol: PPT** 

**Settlement Method:** Exercise into Underlying Futures Contract

**Contract Size:** 1 PJM Tri qualified renewable energy credit contract

**Currency:** USD

Minimum Price Fluctuation: The price quotation convention shall be One cent (\$0.01) per MWh; minimum price fluctuation may vary by trade type. Please see Table in Resolution 1 to this Chapter 18.

**Listing Cycle:** 1. The Exchange may list monthly contracts in the Standard Cycle or any other calendar month it determines for the current year and forward for up to ten years.

<u>2. The Standard Cycle is: January, February, March, April, May, June, July, August, September, October, November and December</u>

Strike Price Intervals: A minimum of ten Strike Prices in increments of \$0.05 above and below the atthe-money Strike Price. Strike Price boundaries are adjusted according to futures price movements. User-defined Strike Prices are allowed in \$0.05 increments.

<u>Last Trading Day:</u> At 4:00 pm EPT on the 15th calendar day of the delivery month. Where the 15th calendar day is not a Business Day, the Last Trading Day shall be the first Business Day following the 15th calendar day of the delivery month.

Option Style: European

**Exercise Method:** Automatic

Exercise procedure: Clearing Members shall provide exercise and abandon instructions to the Clearing Organization in accordance with the Clearing Organization rules

**Exercise time:** 5:30 pm EPT on the Last Trading Day

[REMAINDER OF RULE UNCHANGED]

### ICE FUTURES U.S. BLOCK TRADE – FAQs

\* \* \*

| Contract Name                                                                                 | Commodity<br>Code | Contract<br>Size | Unit of<br>Trading | Block<br>Minimum<br>(in Lots) |
|-----------------------------------------------------------------------------------------------|-------------------|------------------|--------------------|-------------------------------|
| Massachusetts Solar Renewable Energy Certificate Carve Out I Future                           | MSF               | 10               | MWh                | 10                            |
| Massachusetts Solar Renewable Energy Certificate Carve Out II Future                          | MS2               | 10               | MWh                | 10                            |
| New Jersey Compliance Renewable Energy Certificate Class I Future                             | NJN               | 100              | MWh                | 50                            |
| Maryland Compliance Renewable Energy Credit Tier 1 Future                                     | MDE               | 100              | MWh                | 50                            |
| Pennsylvania Compliance Alternative Energy Credit Tier I Future                               | PAR               | 100              | MWh                | 50                            |
| Maryland Solar Renewable Energy Credit Future                                                 | MDX               | 10               | MWh                | 10                            |
| Pennsylvania Solar Alternative Energy Credit Future                                           | PAX               | 10               | MWh                | 10                            |
| Connecticut Compliance Renewable Energy Certificate Class I Future                            | CTT               | 100              | MWh                | 50                            |
| Massachusetts Compliance Renewable Energy Certificate Class I Future                          | MCL               | 100              | MWh                | 50                            |
| NEPOOL Dual Qualified Compliance Renewable Energy Certificate Class I Future                  | NER               | 100              | MWh                | 50                            |
| New Jersey Solar Renewable Energy Certificate Prior Year Future                               | NPR               | 10               | MWh                | 10                            |
| New Jersey Solar Renewable Energy Certificate Future                                          | NPS               | 10               | MWh                | 10                            |
| Option on New Jersey Solar Renewable Energy Certificate Future                                | NPS               | 10               | MWh                | 10                            |
| One Year Mid-Curve Option on New Jersey Solar Renewable<br>Energy Certificate Future          | NPP               | 10               | MWh                | 10                            |
| Two Year Mid-Curve Option on New Jersey Solar Renewable<br>Energy Certificate Future          | NPQ               | 10               | MWh                | 10                            |
| PJM Tri Qualified Renewable Energy Certificate Class I Prior Year Future                      | PPY               | 100              | MWh                | 50                            |
| PJM Tri Qualified Renewable Energy Certificate Class I Future                                 | PPR               | 100              | MWh                | 50                            |
| Option on PJM Tri Qualified Renewable Energy Certificate Class I Future                       | PPR               | 100              | MWh                | 50                            |
| One Year Mid-Curve Option on PJM Tri Qualified Renewable<br>Energy Certificate Class I Future | PPS               | 100              | MWh                | 50                            |
| Two Year Mid-Curve Option on PJM Tri Qualified Renewable<br>Energy Certificate Class I Future | PPT               | 100              | MWh                | 50                            |

\* \* \*

## ICE FUTURES U.S. Energy Division No Cancellation Ranges

\* \* \*

| US Environmental                                                                                    | Month | Option                         | Min/Max<br>Range |
|-----------------------------------------------------------------------------------------------------|-------|--------------------------------|------------------|
| RGGI                                                                                                | 0.10  | 20% of Premium FMV up to 0.10  | 0.05/0.10        |
| CAR-CRT, CFI-US & REC-NJ, TX REC,<br>MD REC, [PA REC] PA AEC, PJM TRI -<br>QEC                      | 0.25  | 20% of Premium FMV up to 0.25  | 0.05/0.25        |
| CCA; OCA (Ontario)                                                                                  | 0.25  | 20% of Premium FMV up to 0.25  | 0.01/0.25        |
| SFI                                                                                                 | 0.50  | 20% of Premium FMV up to 0.50  | 0.05/0.50        |
| CT & MA REC, NEPOOL REC                                                                             | 1.00  | 20% of Premium FMV up to 1.00  | 0.05/1.00        |
| CSAPR SO2 & NOX                                                                                     | 10.00 | 20% of Premium FMV up to 10.00 | 0.50/10.00       |
| RIN                                                                                                 | 0.05  | 20% of Premium FMV up to 0.05  | 0.01/0.05        |
| MA, MD, <u>&amp;</u> NJ [ <del>&amp;PA</del> ] SREC, <u>PA SAEC,</u><br>MA SREC Carve Out; CAIR NOX | 5.00  | 20% of Premium FMV up to 5.00  | 0.50/5.00        |

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# EXHIBIT B [EXHIBIT REDACTED]