

Intercontinental Exchange (NYSE: ICE)

builds, operates and transforms global markets through information, technology and expertise

Markets
Futures, options and OTC markets across the EU, US and Asia

Data

Unrivalled range of data products support critical decision making



Clearing

A global network of clearing houses powering market transparency and security



Macro energy trends

Decarbonization

Renewable energy markets

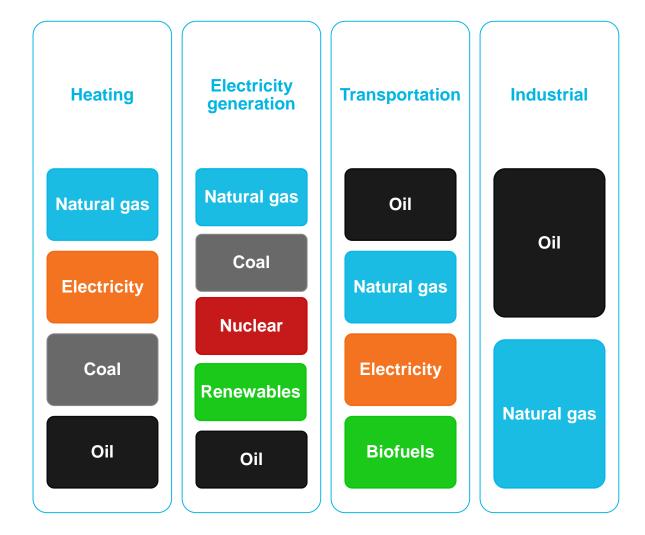
Cap and trade - North America & Europe

Coal Phase out

Biofuels and electrification of transportation



What is energy?





ICE global environmental complex

European Union Emissions Trading
 Scheme (EUETS)

EUA Futures

EUA UK Auction Daily

EUA Phase 3 Daily

Futures

Futures

EUAA Futures

EUA Futures Options

CER Futures

EUA Futures Options

FSM

Western Climate Initiative (WCI)

California Carbon Allowance Futures

 Regional Greenhouse Gas Initiative (RGGI)

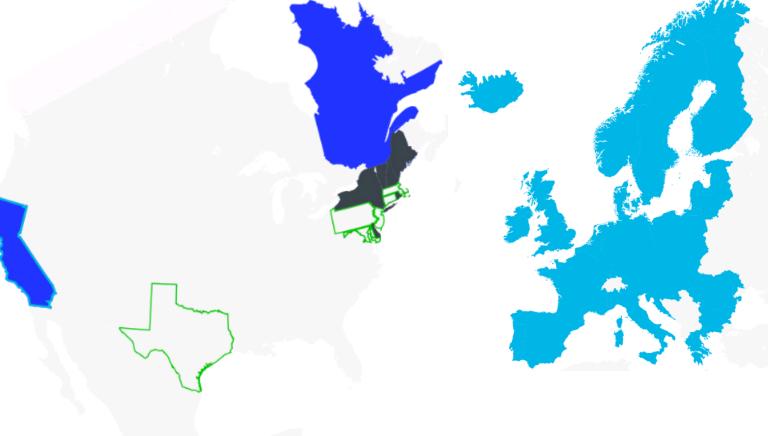
RGGI (Regional Greenhouse Gas Initiative Futures)

 Renewable Energy Certificate (RECs)

Renewable Energy Certificate Futures

Low Carbon Fuel Standard (LCFS)

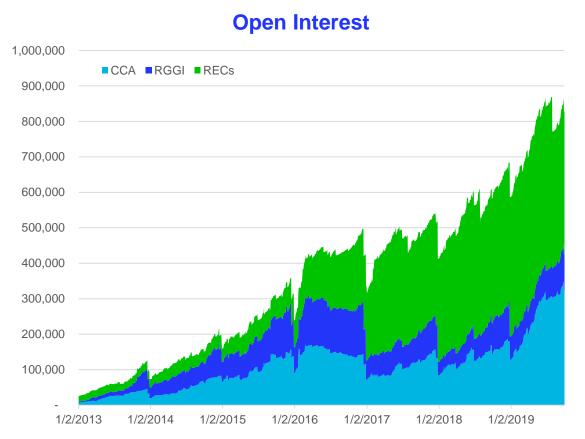
Low Carbon Fuel Standard

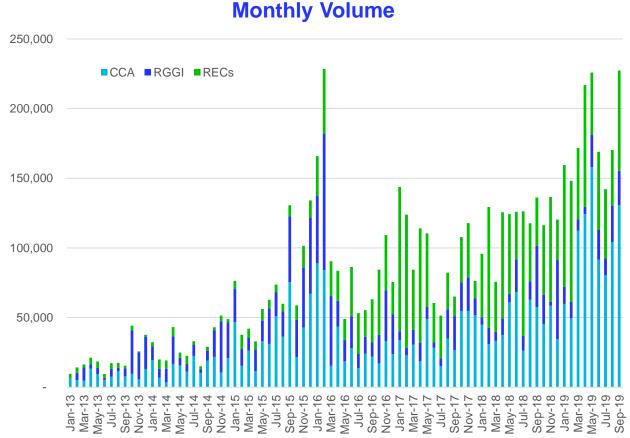




North American environmental markets

Open interest, volume climbs as participants increase their hedging



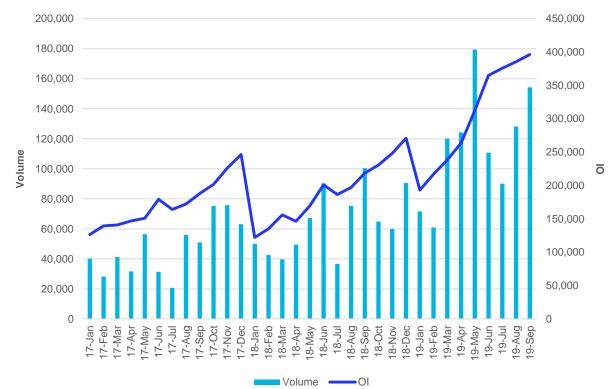




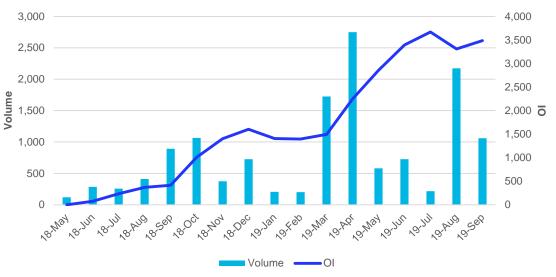
North American environmental markets

Open interest, volume by product group

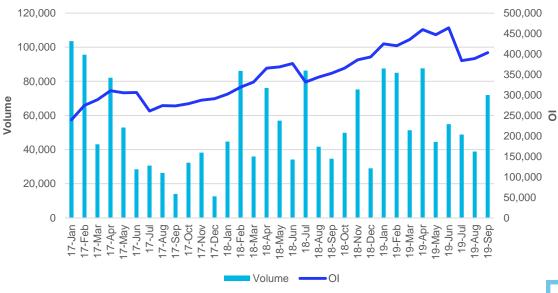
Carbon Volume and Open Interest



LCFS Volume and Open Interest



REC Volume and Open Interest





Global market share

Global Environmental Market Share North America 96% Europe 95% **NA Markets EU Emissions** ADV 43.246 lots 2.7% increase over 2018 ADV 8,653 lots 55% increase over 2018 Open Interest is 1,529,844 lots, notional value Open Interest 825k lots 41% increase over of \$38B 2018 and a notional value of \$6.9B Brexit uncertainty weighing on broader EU Delivery volume 296k YTD 13% increase carbon market

ICE Global Environmental Complex

30 countries, 20 contracts, global benchmarks



over 2018.

Opportunities

Next steps for environmental markets

- Transportation Climate Initiative (TCI)
 - Northeastern 'Cap and Invest' tailpipe emissions markets
- Program Linkages
 - RGGI (North Carolina, New Jersey, Pennsylvania)
 - CCA (Colorado, Nevada, New Mexico, Oregon, Washington, Mexico)
- CORSIA
 - Carbon emissions from aviation industry
- Article 6

