Course 2.1: § 95111

ELECTRIC POWER ENTITIES

2.1.CS: Case Studies
(w/o solutions)

Course 2.1 Modules

- 2.1.1: Introduction – EPE Entities & Structure
- 2.1.2: Imports, Exports, EIM, RPS, & Wheels
- 2.1.Ex: Exercises
- 2.1.3: EPE Reporting Workbooks
- 2.1.4: Verifier Requirements Overview, & e-Tags
- **2.1.CS: Case Studies**

Covered Emissions – Case Study 1 (1 of 3)

- A retail provider, P2P, executes the following transactions under contract:
  - A. 125,000 MWh from a eligible renewable energy wind power facility in Washington is sold by P2P and sunk into the local (WA) balancing authority area
  - B. 2,300 MWh from a eligible renewable energy solar photovoltaic facility in Nevada is brought into the CAISO day ahead market with P2P as the PSE on the physical transmission path of the e-Tag that crosses into and sinks in CA.
  - C. 40,000 MWh is imported from a eligible renewable biomass burning facility in Oregon. P2P is the PSE on the e-Tag on the physical transmission path that crosses into CA and sinks in CA. The CARB specified EF is 1 MT CO_2e/MWh; 20% non-exempt CO_2e*
  - D. 162,000 MWh of bulk system power is purchased and imported by P2P into CA to meet its load

1. Calculate the emissions associated with each of these electricity purchases to find the total covered emissions.
2. Discuss what happens if RECs are not retired for renewable transactions.

Case Study 1 – Solution (2 of 3)

Case Study 1 – Solution (3 of 3)

$$CO_2e_{covered} = CO_2e_{unspecified} + (CO_2e_{specified} - CO_2e_{specified-not\ covered}) - CO_2e_{RPS\_adjustment} - CO_2e_{QE\_adjustment} - CO_2e_{linked}$$

Covered Emissions – Case Study 2 (1 of 3)

- Calculate the total covered CO_2e emissions for a retail provider with the following types of transactions under contract:
  1. 500,000 MWh imported electricity from unspecified sources, aggregated at various transmission source points
  2. 150,000 MWh imported electricity from a specified facility with EF of 1 MT CO_2e/MWh
  3. 25,000 MWh purchased from an eligible renewable energy resource outside of CA. The power does not meet the MRR definition of directly delivered electricity. 15,000 RECs are retired.
  4. 15,000 MWh geothermal directly delivered from Nevada with EF of 0.073 MT CO_2e/MWh.
  5. 20,000 MWh electricity from verified biomass fuels directly delivered from Oregon. Emission factor of 1.376 MT CO_2e/MWh, 17% non-exempt*
  6. 250,000 MWh electricity purchased from PVWest (AZ) and imported to CA. E-Tag shows transmission source and sink points on e-Tag both located inside CA

Case Study 2 – Solution (2 of 3)

Case Study 2 – Solution (3 of 3)

$$CO_2e_{covered} = CO_2e_{unspecified} + (CO_2e_{specified} - CO_2e_{specified-not\ covered}) - CO_2e_{RPS\_adjustment} - CO_2e_{QE\_adjustment} - CO_2e_{linked}$$

Emission Type	Transaction(s)	Covered Calculation	Subtotal
Unspecified Emissions			
Specified Emissions			
Specified Emissions (Exempt)			
RPS Adjustment			
Covered Emissions			

Case Study 3 – Solution (1 of 3)

- Please attempt Case Study 3 in Handout 2.1.2. A blank word version has been provided in your Course 2.1 handouts packet.
- A PDF version with answers has also been provided for your review after.

Case Study 3 – Solution (2 of 3)

Case Study 3 – Solution (3 of 3)

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Transactions Specialist Courses

COMPLETE

- Course 2.1: § 95111
  - Electric Power Entities (EPE)

NEXT

- Course 2.2: § 95121
  - Suppliers of Transportation Fuels
    - Petroleum Products & Biofuels
- Course 2.3: § 95122
  - Suppliers of Natural Gas, Natural Gas Liquids & Liquefied Petroleum Gas
- Course 2.4: § 95123
  - Suppliers of Carbon Dioxide