



EPRI Greenhouse Gas Emissions Offset Policy Dialogue
Workshop 9 – *Commercial Procurement of
GHG Emissions Offsets*

“Capital Power: Strategies for Offset Procurement”

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- Key GHG Market Overview
- Activities, Expertise and Strategies
- Lessons Learned



- Capital Power (TSX: CPX) is a growth-oriented North American power producer, building on more than a century of innovation and reliable performance
- Headquartered in Edmonton, Alberta, Capital Power has interests in 32 facilities in Canada and the U.S. totaling approximately 3,800 MW of generation capacity
- More than \$20 million invested in over seven million tonnes of verified offsets since 2007, with the total volume of offsets purchased and/or under contract exceeding 10 million tonnes

Capital Power Operations

Including Capital Power Income LP

- Capital Power Plants
- Capital Power Income LP Plants

* Taylor Coulee and Joffre are not operated by Capital Power.



Capital Power (TSX: CPX) indirectly owns a 49% voting interest and 100% economic interest in a holding company that owns 100% of the shares of the Capital Power Income L.P. General Partner and 29.8% of CPILP's units (TSX: CPA.UN).

Involved in Three Carbon Markets



Compliance Market – a market that already exists, or for which the rules are known in advance, in which participants buy carbon offsets to comply with limits on the total amount of carbon dioxide they can legally emit

Pre-Compliance market – a market in which participants buy carbon offsets that they think will meet the offset standards of a future compliance market, for which the rules are not yet clear

Voluntary – similar to the pre-compliance market but less certainty over applicability to future regulatory regimes. Can play a role in CSR or in meeting voluntary compliance obligations

- **Alberta SGER**
 - 12% intensity reduction target
 - All contracts OTC
 - Balance of build and buy
 - Own and operate one LFG project
 - Technologies vary from agricultural tillage to nitric acid abatement
- **Regional GHG Initiative (RGGI)**
 - Exchange based trading only
- **Clean Development Mechanism (CDM)**
 - Participated via compliance fund at a time when Canada was supporting domestic compliance through CDM
 - Highly bureaucratic process to obtain credits via the CDM

Looking at Federal (Canada and US) and regional projects

- **US Federal Pre-Compliance**
 - Projects located throughout US
 - All contracts OTC
 - Primarily brokered deals
 - Technologies vary from LFG to forestry
 - Climate Action Reserve (CAR)
 - Voluntary Carbon Standard (VCS)
 - American Carbon Registry (ACR)
- **Canadian Federal Pre-Compliance**
 - Projects located throughout Canada (excluding AB)
 - All contracts OTC
 - Brokered and bilateral deals
 - Technologies vary from LFG to SF6
 - Canadian Standards Association (CSA)
 - International Standards Organisation

- **Environmental & Emissions Portfolio**

- Commercial group under Commodity Portfolio Management
- Six dedicated individuals
 - 2 in offset procurement
 - 2 in sales and trading
 - 1 portfolio specialist
 - 1 manager

- **Core competencies**

- **Regulatory:** extensive understanding of the regulatory environment including targets, covered entities, presence/absence of offsets, interaction with other programs etc
- **Commercial:** identify opportunities and negotiate complex deals (i.e. term sheets, letters of intent, ERPAs etc.) with wide range of counter-parties and risk factors
- **Technical:** projects, particularly in the pre-compliance space require extensive due diligence. Handled in-house and outsourced depending on the project technology

Strategies:

- **Cost Mitigation:** purchasing GHG offsets on behalf of Capital Power Corporation assets for compliance with existing regulations
- **Revenue Generation:** re-selling GHG offset length for margin generation under compliance and pre-compliance markets

Tactics:

- **Early Mover:** understand markets, technologies, regulations and opportunities therein at an early stage
- **Buy vs Build:**
 - Historically focused on “buying” rather than “building” – may transition towards “building”
 - Development of procurement pipeline of bilateral and brokered deals
 - Build has cost advantages but risk profile and level of expertise increases accordingly
- **Engagement**
 - Developing and having quantification protocols approved by Alberta Environment
 - Leverage expertise across firm: finance, credit, legal, government affairs
 - Involvement with industry associations, conferences, working groups (IPOG),
- **Diversification:**
 - Acquire projects from different technology types
 - Not over-weight with any one standard
 - Dollar cost averaging of existing portfolio as prices fluctuate
 - Carbon funds

- **Environmental markets are policy driven**
 - Compliance demand and supply is a function of policy and therefore subject to change
 - OTC transactions are preferable for contracting flexibility
- **Markets take time to develop**
 - Longer term policy certainty needed to facilitate investment in technology (including market mechanisms)
 - Recognition for early action to incent investment and create market liquidity
- **Diversification is key**
 - Fungibility between systems is important but will take time to evolve
 - Diversification in geography and technology is important
- **Quality Matters**
 - Independently verified against recognized standards (i.e. CAR)
 - Registration of projects and credits
 - Vintage of credits is important
- **Uncertainty Creates Opportunity**
 - Some of today's pre-compliance offsets may not qualify under future regulations
 - Still have time to ramp up and build internal capacity (i.e. learning by doing)
 - Climate Reserve Tonne (CRT) prices down ~60% on CCFE since start of year – Opportunity to build a competitive advantage and an early position in the market at low prices

Capital Power
Corporation



Questions?

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