

Load Shed Services for imports Information Session

Tuesday, May 8, 2018

- Introductions
- AESO procurement
- LSSi overview
- Agreement key features
- Eligibility and requirements
- Competition schedule
- Next steps
- Break
 - Opportunity to submit questions
- Q & A

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About the AESO

- AESO is an independent, not-for-profit, statutory corporation in place since 2003
- Operates in the public interest
- Core functions
 - Plans the transmission system
 - Connects load and generation
 - Operates the electricity market
 - Operates the grid 24/7
 - Manages the Renewable Electricity Program (REP)

- The AESO procures services, including but not limited to:
 - Ancillary services, IT services, engineering or other technical services in order to meet its obligations under the *Electric Utilities Act* in a manner that upholds the fair treatment of all participants in the procurement process
- Key competition objectives
 - Utilize competitive market forces to determine the cost
 - Conduct a fair and transparent competition overseen by a fairness advisor
 - Be straightforward and efficient
 - Minimize perceived or actual barriers to participation
 - Be guided by the principle of allocating risk to those best able to manage it

- Ancillary services provide supplementary sources of supply to help maintain grid stability
 - They are essential for providing Albertans with safe, secure and reliable electricity
- The AESO, as the independent system operator, procures the following ancillary services on behalf of all users:
 - Operating Reserves
 - Transmission Must-Run (TMR)
 - Load Shed Services for imports (LSSi)
 - Black Start services

- LSSi is a transmission system reliability product
 - Allows the AESO to fulfill its legislative mandate to restore transmission intertie capability from BC and Montana
 - LSSi enables increasing the import transfer capability without compromising system reliability
 - LSSi is used to mitigate the sudden frequency deviations associated with losing the inerties
 - LSSi is provided by loads that agree to be tripped following the frequency drop
 - This load shedding process allows for arrest of frequency decay and preserves the stability of the Alberta Interconnected Electric System

- The competitive process to procure LSSi will consist of two stages:
 - This REOI stage will aid in gathering stakeholder feedback and determining the next steps for the AESO in the competition for LSSi
 - An RFP stage where interested parties will submit their bid prices for its facilities
- The successful bidders, selected through a transparent evaluation process during the RFP, will enter into an Import Load Shed Agreement (ILSA) with the AESO

- Historically
 - Hourly offered LSSi volumes have varied from contracted volumes
 - LSSi offers have materially reduced at higher prices
 - LSSi offered volumes are not available after initial arming
- Desired future state
 - Real-time offered volumes are better aligned with contracted volumes
 - Improvement of LSSi offers at different price levels
 - Improved overall compliance performance

LSSi competition key features

- Volume:
 - Target procurement volume of 315 MW
- Term:
 - Contract for three-year term (January 2019 to December 2021)
- Clarity of contract language
 - Examples include: force majeure vs. forced outage, notice requirements
- Compliance
 - Refine language regarding failure to supply and events of default

- Availability payment: a service provider is compensated for making their load available for provision of LSSi

Availability payment = availability price (\$/MW) * available MW * availability factor

- Availability price to be bid in during RFP
- Availability factor: (available MW/contracted MW)

- Arming payment: a service provider is given an additional payment for when the under frequency relay is armed

Arming payment = arming price (\$/MW) * MW armed in the hour

- Arming price to be bid in during RFP

- Trip payment: a service provider is paid when their load is tripped due to an under frequency event

Trip payment = \$1,000/MW * actual MW tripped during an under frequency event

- Must be located in the Alberta balancing authority area
- Must be able to provide a minimum of 1MW of LSSi
- The load may be an aggregation of several individual loads from various facilities
- Loads that are part of the Under Frequency Load Shedding (UFLS) program are eligible to provide LSSi except for the time-delayed blocks D1, D2 and D3
- The AESO may need to evaluate the maximum amount of load offered for LSSi in any one geographical location or by any one LSSi provider

- Must be able to receive and respond to SCADA signals received from the System Controller
- When armed, the under-frequency relay scheme requires that the Armed Volume is disconnected from the System within zero point two (0.2) seconds (12 cycles) of the frequency reaching 59.50 Hz (+/- 0.02 Hz)
- Under-frequency relay scheme shall be developed using digital under-frequency relay(s) measuring frequency at the load facility
- Must be able to remain off the grid for 60 minutes
- Must provide an APEGA engineer stamped report confirming technical requirements every five years
 - LSSi Technical Requirements attached to REOI

LSSi competition schedule

REOI

RFP

Award

**Operational
Readiness**

→ **Opened**
May 1, 2018

→ **RFP and draft ILSA**
posted: June 1, 2018

→ **Successful bidders**
selected: Q4 2018

→ **January 1, 2019**

→ **REOI period**
submission deadline:
May 14, 2018

→ **Feedback on ILSA**
due: June 18, 2018

→ **Final ILSA**
posted: July 3, 2018

→ **Submission deadline:**
July 16, 2018

Next steps

- Q&A document, information session presentation and any competition updates will be posted at www.aeso.ca/market/ancillary-services/procurement/
- Email LSSi@aeso.ca for EOI Form submission and all general inquiries
- SharePoint registration for RFP
 - To receive the LSSi RFP, registration for LSSi SharePoint online site is required
 - To register for SharePoint, contact LSSi@aeso.ca

- Adhere to timelines
- Pay attention to detail
 - Sign forms where requested
 - Complete information in the manner instructed
- Seek clarification during the process
 - General inquiry period open until the publication of the procurement documents on June 1, 2018 through LSSi@aeso.ca
 - During RFP questions must be submitted through SharePoint

Break

Please submit your questions

Q & A

Thank you