WIND AND SOLAR RFQ/RFP PROCESS

Saskatchewan Renewables
IPP and Supplier Information Session
Saskatoon, Saskatchewan
November 17, 2016

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RENEWABLES ROADMAP

- 40% emissions reduction from 2005 levels by 2030
- By doubling the percentage of renewables in our supply mix
- Generation to be 50% renewable by capacity by 2030
- Very exciting time for Saskatchewan
- Significant build of renewables projects ahead!
- Will focus today mainly on Utility Scale competition opportunity

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RENEWABLES ROADMAP

- 120 MW of solar by 2025
- 1,600 MW of new wind by 2030
- Biomass
- Geothermal
- Wind and Solar goals will be accomplished primarily through IPP builds

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KEY STAKEHOLDERS

- Energy rate payers
- Communities
- Proponents / Developers
- Vendors
- Contractors
- Government of Saskatchewan
- First Nations
- Environmental organizations

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PRE-PROCUREMENT CONSULTATIONS

- Consultation with many groups over the last year
  - Renewables Developers
  - CanWEA, CanSIA
  - Government
  - Communities
  - Rural and Town Administrations
  - Environmental Groups
  - General Public
  - Other Provinces and System Operators
  - Contractors
  - Here today
    - Your Comments and Survey

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COMPETITIVE PROCUREMENTS

- **Economics** – Renewable power at the best value for the Saskatchewan rate payers, while reducing SaskPower's carbon footprint
- **Environment** – Projects must be environmentally sound and low risk
- **System** – Projects readily accommodated with existing distribution / transmission capacity and operating capabilities

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GOALS

- Fair, open, transparent competitions
- Obtain good value
- Make sense to stakeholders
- Stable and consistent throughout the competition
- Provide projects that are a good fit in the communities where they are situated
- Take us forward towards a successful transition of the SaskPower system

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LOTS OF INTEREST!

- Over 125 organizations have downloaded the Solar RFQ form
- Very high level of participation anticipated for the Wind competition
- Reflects the high level of interest in the renewable builds being put forward in SK and AB

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TWO-STAGE IPP COMPETITION PROCESS

- RFQ: The Qualifying stage where companies are qualified according to specific criteria to allow advancement to the RFP stage

- RFP: The Evaluation stage where projects from qualified proponents are evaluated based on criteria specific to the competition

- Proponent question sessions are provided subsequent to each RFQ and RFP

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EVALUATION

- Evaluations done by multi-discipline SaskPower committee
- An external Fairness Monitor is already engaged for the competitions and will be in place throughout
- A debrief opportunity will be offered to the unsuccessful bidders in our competitions

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UPCOMING COMPETITION SCHEDULES

Wind (up to 200 MW) :

- RFQ → January 2017
- RFP → mid-May 2017
- Project Awarded by the end of 2017
- Project In-Service target Q2 2020

In-service dates subject to final project schedule

Solar (10 MW) :

- RFQ → September 2016
- RFP → December 2016
- Project Awarded Q4 2017
- Project In-Service target Q4 2018

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SOLAR COMPETITION

SOLAR COMPETITION

- One 10MW, fixed-panel, photovoltaic facility
- Built in Saskatchewan
- Designed, built, commissioned and operated by the winning proponent
- Option of SaskPower or Proponent's own site
- In-service target of Q4 2018

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SOLAR COMPETITION

SaskPower is identifying and qualifying the site it will offer for the project

- Strong solar area

Undertaking

- Initial interconnection assessment
- Initial geotechnical analysis
- Environmental screening
- Initial community acceptance work

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SOLAR COMPETITION

- Price and escalation established in the 20 year PPA
- Solid, predictable cash flow throughout the contract
- Very bankable – favorable for financing
- PPA will be an energy only contract with no payment for capacity or ancillary services

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SOLAR COMPETITION

- Request for Qualifications
  - issued in September
- Key Criteria include:
  - Knowledge of renewables projects
  - Minimum equity level
- Initial Community Engagement work for a project has been started by SaskPower
  - Key handoff for this project

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SOLAR COMPETITION

Request for Proposals Criteria may include

- Price (including interconnection cost)
- Community engagement history and plan
- First Nations Participation
- Financial risk
- Site – Environmental suitability
- Knowledge of solar projects
- Community Sustainability

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SOLAR COMPETITION

Requirements may include:

- Safety – Compliance with SaskPower standard
- Technical requirements
  - Outlook is to be as flexible as possible
  - Proponents to bring solutions / technology
- Proponents must prove land control for a site they propose

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SOLAR EVALUATION

- Evaluated Price will be based on the bid price PLUS interconnection cost(s)
- Evaluation scoring will be based on the combination of scores for the key criteria
- Pricing will be the criteria with the heaviest weighting
- Siting, Community and First Nations also substantial
- All criteria are important

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WIND COMPETITION

WIND COMPETITION

- Up to 200MW of wind capacity
- Considering accepting 25, 100 or 200 MW proposals
- Up to two proposals allowed per Proponent
- Project(s) proposed are to be located in Sask.
- Future competitions may be focused on specific geographic areas to help balance the system
- Projects to be designed, sited, built, commissioned and operated by the Developer on Developer chosen sites
- Project(s) In Service target Q2 2020

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WIND COMPETITION

- Price and escalation established in the 25 year PPA
- Solid, predictable cash flow throughout the contract
- Very bankable – favorable for financing
- PPA for this project will be an energy only contract with no payment for capacity or ancillary services

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WIND COMPETITION

Request for Qualifications

- Key Criteria to include:
  - Minimum threshold:
    - Experience in utility scale wind projects
    - Minimum equity level
  - Qualifying
    - Overall financial capability, combined with
    - Level of experience in wind projects

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WIND COMPETITION

Request for Proposals Criteria may include

- Price (including interconnection cost)
- Community Engagement history and plan
- First Nations participation
- Site suitability in alignment with the Ministry of Environment Siting Guidelines and other Environmental Aspects
- Community Sustainability

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WIND COMPETITION

Requirements may include:

- Safety – compliance with SaskPower standard
- Technical requirements
  - Outlook is to be as flexible as possible
  - Proponents to bring solutions/technology

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WIND COMPETITION

Requirements will include:

- Minimum one year of high quality met-tower wind resource data verified by a professional wind resource expert

- Proponents must prove 100% land control for the proposed wind farm sites)

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WIND EVALUATION

- Evaluated Pricing will be based on the bid price Plus interconnection cost(s)
- Loss adjustment factor will be applied for Wind projects
- Evaluation scoring will be based on the combination of scores for the key criteria
- Pricing will be the criteria with the heaviest weighting
- Siting, Community and First Nations also substantial
- All criteria important

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CONFORMED AGREEMENT – PPA

- Proponents that qualify for the RFP stage will be given the Initial Draft PPA
- Opportunities provided for questions and feedback
- Adjustments may be made to the PPA by SaskPower based on the feedback
- Final conformed agreement will be the refined, conformed version that will be signed by the winning proponent
- No further negotiation at this stage
- Provides a high quality PPA that is well understood by the Proponents and current with industry practices

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LONG-TERM OUTLOOK - WIND

Year	MW Addition
2019	207
2020	200
2021	200
2023	200
2024	200
2025	200
2026	200
2027	200
2028	200
2029	100

Current Preferred Supply Plan calls for additional wind capacity

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LONG-TERM OUTLOOK - SOLAR

Current Preferred Supply Plan calls for additional solar capacity:

Year	MW Addition
2018	60*
2025	60**
2031	60**

*Solar will be through Utility, Community and FNPA projects
**Builds subsequent to the first 60 MW will be from a combination of sources with a significant IPP utility element

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COMPETITIVE PROCESSES

- Info conference calls provided after RFQ and RFP posting
- SaskPower competitions are posted on sasktenders.ca and MERX.com/SaskPower websites
- Follow up questions / answers go through MERX while competitions are underway
- SaskPower updates information the Renewables Roadmap page on saskpower.com

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FOR MORE INFORMATION

Accounts and Services | Efficiency Programs and Tips | Our Power Future | Safety | About Us

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Powering the North

CHAPTER 6

Building I1K power line takes massive effort on the ground and in the sky

Innovating Today to Power Tomorrow

CHAPTER 5

Power Engineers are difficult to recruit. We've launched a new tool to help young people get the experience they need to fill these important roles

Our Power Future

Construction Projects

Innovating Today to Power Tomorrow

Capturing Carbon and the World's Attention

Raising the Bar

Waste Heat No More

When Opportunity Comes to You

It Takes Power to Grow

Saskatchewan is growing, what about SaskPower?

Talking About the Challenge

Our Electricity

How Our Power Stations Work

Our Electrical System

Supply Options

Our Plan and the Environment

Electric and Magnetic Fields

Minimizing Damage to the Environment

Register Your Organic Lands

Powering the North

Love for the Land

Building for the Future

Powering Through the Cold

Safety a Top Priority

Putting the Pieces Together

Renewables Roadmap

#powertogrow Tagboard

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UNSOLICITED POWER PROPOSAL (UPP)

UPP program looks at project proposals that fall outside of:

- An existing SaskPower program
  - Distributed Generation program, etc.
- Any current or upcoming competitive solicitations

Examples of projects considered include flare gas, biomass, biogas, wind, alternate variations of technologies

Can include utility-scale projects

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UNSOLICITED POWER PROPOSAL (UPP)

Key Considerations:

- Technology proposed
- Location of the project
- Energy cost, Interconnection considerations
- Environmental impact
- Alignment with future supply needs
- Public acceptance

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UNSOLICITED POWER PROPOSAL (UPP)

The stages of this process consist of:

1. Initial high level assessment

2. Detailed technical analysis on the proposed projects and interconnection

3. Negotiations regarding a final agreement and process to move the proposal to project development

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SUMMARY

- SaskPower doubling the percentage of renewables in our supply mix by 2030
- Many new opportunities
- SaskPower program and contracts attractive for the market
- Very exciting time for Saskatchewan

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Questions & Discussion

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