

Network Open  
Season/Generator  
Interconnection Reform  
July 20, 2011

**Generator Interconnection  
Procedural Reform**



## Generator Interconnection Procedural Reform

### Principles

- Promote flexibility, transparency and efficiency in interconnection
- Provide greater certainty to interconnection plans of service for both BPA and customers
- Achieve greater equity in the funding of shared facilities
- Promote certainty in the schedules for the construction of interconnection and network facilities
- Support the continued participation of small generating facilities in the interconnection process

## Generator Interconnection Procedural Reform

### Status & Alternatives

- BPA has been reviewing potential reforms to its Interconnection Procedures and met with customers in December, 2010
- Alternative approaches are being developed for discussion and possible consideration
  - Some may require OATT revisions
  - Some may be achievable through policy change and Business Practices

## Generator Interconnection Procedural Reform

### Current Interconnection Procedures:

**LGIP:** Attachment L to OATT

Applies to generators  $> 20$  MW  
FERC Order 2003, adapted to NEPA

**SGIP:** Attachment N to OATT

Covers generators  $\leq 20$  MW  
FERC Order 2006, adapted to NEPA

## Generator Interconnection Procedural Reform

### A Note on Terminology:

**LGIP:** Large Generator Interconnection Procedures, which govern the submittal of a **Request**, its Scoping and **Study**, leading to the

**LGIA:** Large Generator Interconnection Agreement, which is Appendix 6 to the LGIP.

**SGIP:** Small Generator Interconnection Procedures, which govern the submittal of a **Request**, its Scoping and **Study**, leading to the

**SGIA:** Small Generator Interconnection Agreement, which is part of the SGIP.

## Generator Interconnection Procedural Reform

### BPA's experience with the LGIP:

<b>Action:</b>	<b>Deposit:</b>	<b>Durations (approximations):</b>
Request submitted; Scoping	\$10,000 (+\$10k Site Control optional)	1 month
Feasibility Study (FES)	\$10,000	3 months
Interconnection System Impact Study (ISIS)	\$50,000	4-6 months
Facilities Study (FAS)	Up to \$100,000	6-18 months for Draft FAS
NEPA ROD	~\$50,000 (typical Tiered ROD)	Contingent on developer permit/site certificate.
<i>Total typical LGIP costs:</i>	<i>Deposits: ~ \$175,000 Actuals: ~\$80-120,000</i>	<i>18-30 months from Request to Draft FAS report</i>

## Generator Interconnection Procedural Reform

### **Key issues with BPA's current queue management process:**

- Low queue-entry and study deposits and costs.
- Each study must assume all prior requests are interconnected and operating.
- Uncertainty of pace of development of earlier requests.
- FERC pro-forma "First Come-First Pay" rules place the obligation for financing shared facilities on the earliest-queued request.
- Work-plan impacts on the construction of associated transmission and interconnection facilities.
- Impact of NEPA requirements and Developer's site permitting activity on LGIP timeline.

## Generator Interconnection Procedural Reform

### **How does NEPA affect the discussion?**

- The FERC pro-forma LGIP intended that the Study process should last some 14 to 20 months and that the LGIA should be tendered within 30 days of the Final Facilities Study (FAS) Report.
- Section 11.2 of BPA's LGIP inserts the requirement that the LGIA will not be tendered until the NEPA decision document (ROD) has been completed.
- The Site Certificate or Permit is thus not obtained before the FAS is complete, and may be one or more years later.
- With no permit and no ROD, the LGIA may not be tendered even though studies are complete.

## Generator Interconnection Procedural Reform



Generator Interconnection Procedural Reform

**Interconnection Queue: May 18, 2011**

<b>Fuel Source:</b>	<b>Requests:</b>	<b>MW:</b>
Wind	90	15,238
Solar	11	163
Geothermal	2	178
Biomass/Biogas	5	141
Hydro	3	99
Pumped Storage	1	1,200
Gas Thermal	7	3,484
<b>TOTAL:</b>	<b>119</b>	<b>20,503</b>

- Totals are net of duplicate requests for alternate POIs for the same project
- Where Winter/Summer MWs differ, the higher MW is counted
- This table excludes all Requests for which a BAASA, Construction Agreement, LGIA or SGIA has been executed

## Generator Interconnection Procedural Reform

# Summary of Interconnection Activity Since 2000

Approximately 1,700 MW thermal and 3,880 MW wind generation has been connected since 2000.

- Currently c. 20,500 MW in Interconnection queue, with:
  - c. 5,400 MW with FAS reports issued;
  - c. 12,800 MW in the Feasibility or ISIS study stages.
- We expect to build Interconnection Facilities for 2,300 MW of new generation by end of 2012

## Generator Interconnection Procedural Reform

**Case Study**

In the eastern Columbia Gorge, we have requests for 9,040 MW wind and 240MW thermal generation, for which BPA would construct 6 major 500 kV/230 kV substations –

<b>Requests</b>	<b>Substation:</b>	<b>MW:</b>
5	China Hollow	952 MW
8	Diamond Butte	2,425 MW
8	Longhorn	1,252 MW
10	Stanfield	2,802 MW
2	Buckley	549 MW
5	Sandpiper	1,300 MW

## Generator Interconnection Procedural Reform

How should BPA consider all of these requests, assuming many of these studies will not result in interconnections?

This 9,040 MW of wind requests alone would more than satisfy the ~7,000 MW of the NW RPS needed by 2025

Plus the c.6,200 MW expected to be online connected to BPA by end of 2013

Plus the many other renewable-energy requests in the BPA queue

Plus the other renewable generation online or constructing in other NW Balancing Authorities.

## Generator Interconnection Procedural Reform

### **Exploring options**

BPA sees merit in exploring and discussing the ideas in the slides that follow, as well as inviting suggestions for other ideas and concepts.

Throughout the process BPA will be seeking stakeholder input and comments.

## Generator Interconnection Procedural Reform

BPA is reviewing concepts adopted by other Transmission Providers or ISOs:

**‘Parking Lot’**

**‘Milestones’**

**‘Clustering’**

**‘First ready, first served’**

**‘Pro-rata funding for shared facilities’**

## Generator Interconnection Procedural Reform

**And...**

**BPA is reviewing the impact  
NEPA policy has on  
queue management practices.**

## Generator Interconnection Procedural Reform

### **BPA is contemplating:**

Making site permitting or certification a Milestone requirement, to strengthen permitting timeline and performance obligations.

This may require OATT or Business Practice changes.

## Generator Interconnection Procedural Reform

### **SGIP and LGIP:**

- BPA is considering the merits of:
- Melding the SGIP into the LGIP
- Creating a 'fast-track' process for projects that have no material impact on the system or other projects
- Possibly develop more stringent eligibility criteria for submittal of a GI request and for its feasibility review

## Generator Interconnection Procedural Reform

### **Clustering Generation Interconnection Requests:**

- Consider electro-geographically related requests concurrently
- Establish windows for study cycles
- Apply queue priority, Parking Lot rules and Milestone requirements within each cluster
- Allow latecomers to enter the cluster and, if 'milestone-ready', progress past less ready projects
- Allocate costs of shared interconnection facilities
- Clustering may allow for coordinated review of interrelated interconnection and NOS requests

## Generator Interconnection Procedural Reform

### Parking Lot:

- After the Draft FAS (and/or ISIS), a project may ‘park’ until Milestones have been met
- Within each Cluster, projects that have met Milestones are able to move forward (‘First ready/First served’)
- “First ready” projects may proceed regardless of queue priority
- Remove the 3-year suspension provision from the LGIA

## Generator Interconnection Procedural Reform

### **Milestones:**

Would reflect a project's 'developability' and its ability to commit to progress out of the 'Parking Lot'

### **Could include:**

- Definitive proof of site control (more than an 'option')
- Deliverability (transmission, PTSA)
- Power Purchase Agreement or similar
- Substantial commitment to funding upgrades and interconnection facilities; and/or substantial upfront financing
- Proof of site permitting activity and certainty of site permit
- Other ? ?

## Generator Interconnection Procedural Reform

### **Pro-rata funding of shared facilities and upgrades:**

Consider revising section 4.1 of the LGIP to require pro-rata funding for shared facilities within a cluster.

## Generator Interconnection Procedural Reform

### **Transition from BPA's current to future state:**

If BPA were to adopt some mixture of these ideas, a transition plan could include entry to the Parking Lot and/or implementing 'Milestone' conditions to progress onward

BPA anticipates developing a process to transition existing GI requests

## Generator Interconnection Procedural Reform

### **In summary:**

BPA believes that application of some mix of these ideas may provide:

- Greater efficiencies in interconnection queue management
- Greater transparency in the study process
- Greater flexibility for developers and BPA in managing construction schedules for shovel-ready generation projects
- Better interaction between Transmission Network Open Season and the Generator Interconnection process
- Appropriate levels of expectations during project development and maturation
- Greater equity in interconnecting multiple projects at shared facilities