

REINHOLD ENVIRONMENTAL Ltd.



**2013 NO<sub>x</sub>-Combustion Round Table  
& Expo Presentations**

February 18 & 19, 2013, in Salt Lake City, UT / Hosted by PacifiCorp

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## Advances in SO<sub>3</sub> Tolerant Activated Carbons

Joe Wong – ADA Carbon Solutions

NOx Combustion Roundtable  
February 18, 2013

*Expertise. Reliability. Compliance.*

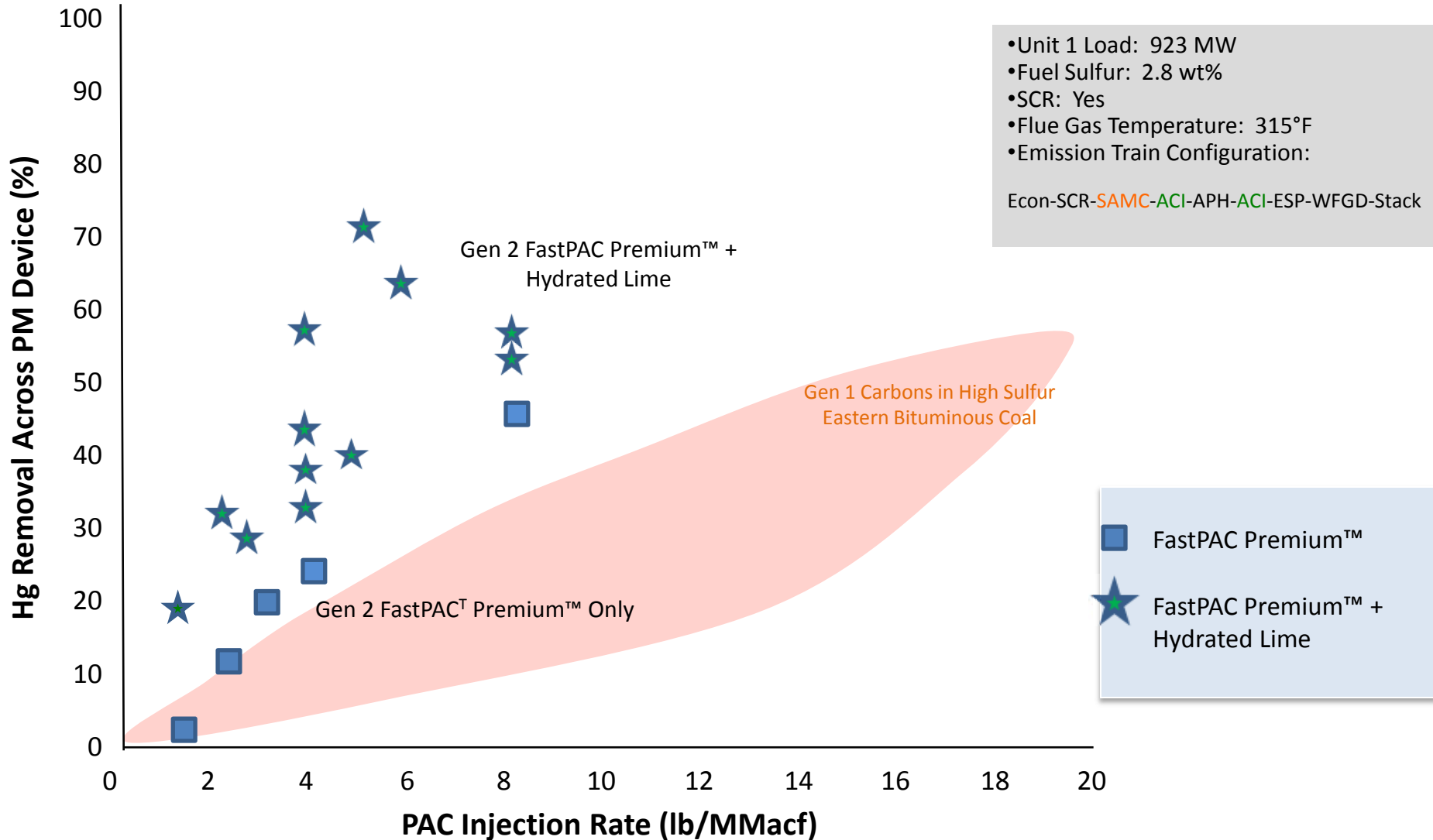
What is the problem?

- At what level of  $\text{SO}_3$ ?
- With or without Dry Sorbent Injection (DSI)?
- What is the level of Hg removal targeted?
- At what PAC injection rate?
- What are the constraints?

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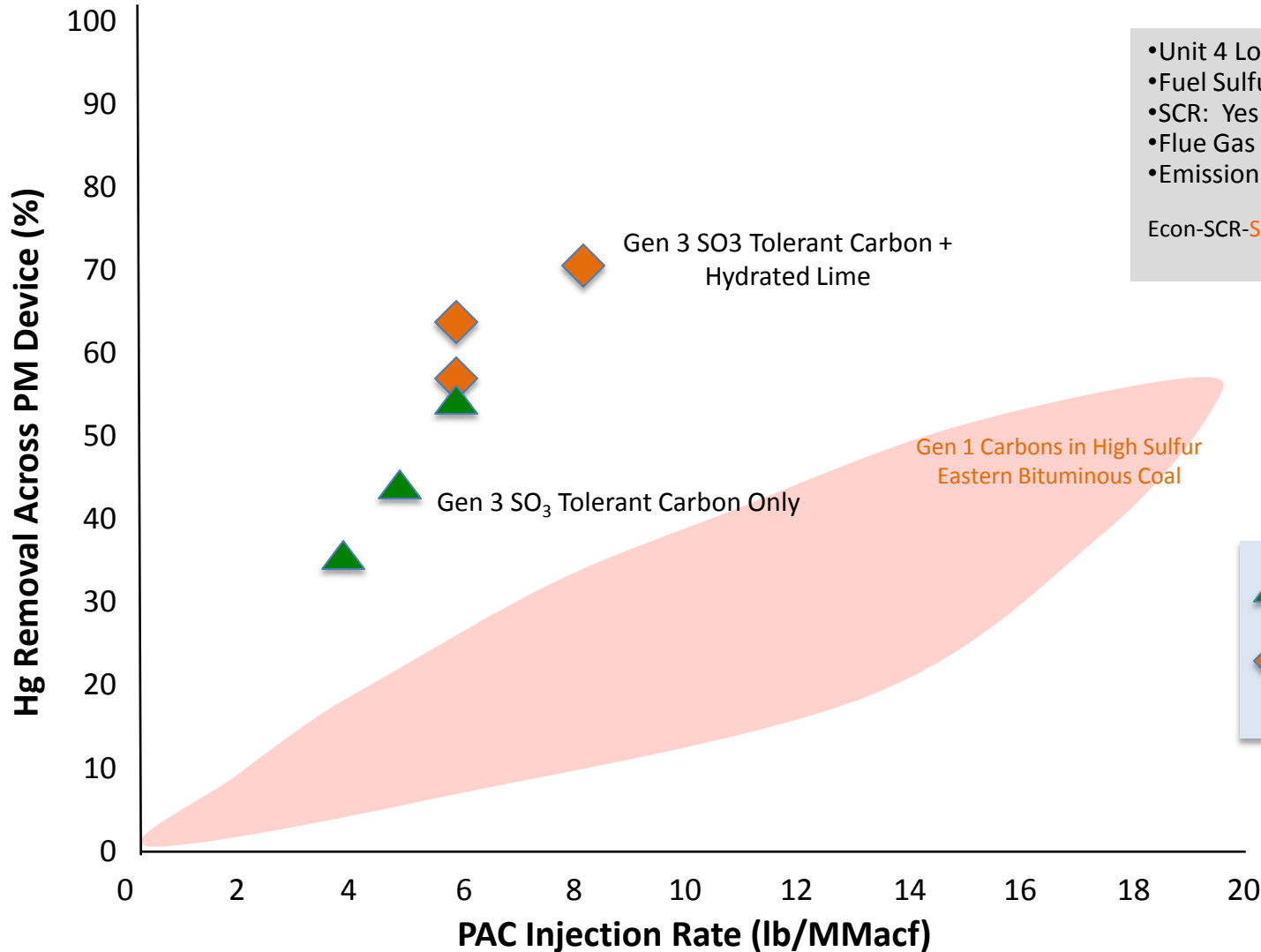
Creation of operational solution options

# Southern Plant Wansley: Gen 2 FastPAC Premium™ Demonstrates 30-60% PAC Reduction & Offers Synergistic Performance with DSI on High Sulfur Bituminous Coal



*Expertise. Reliability. Compliance.*

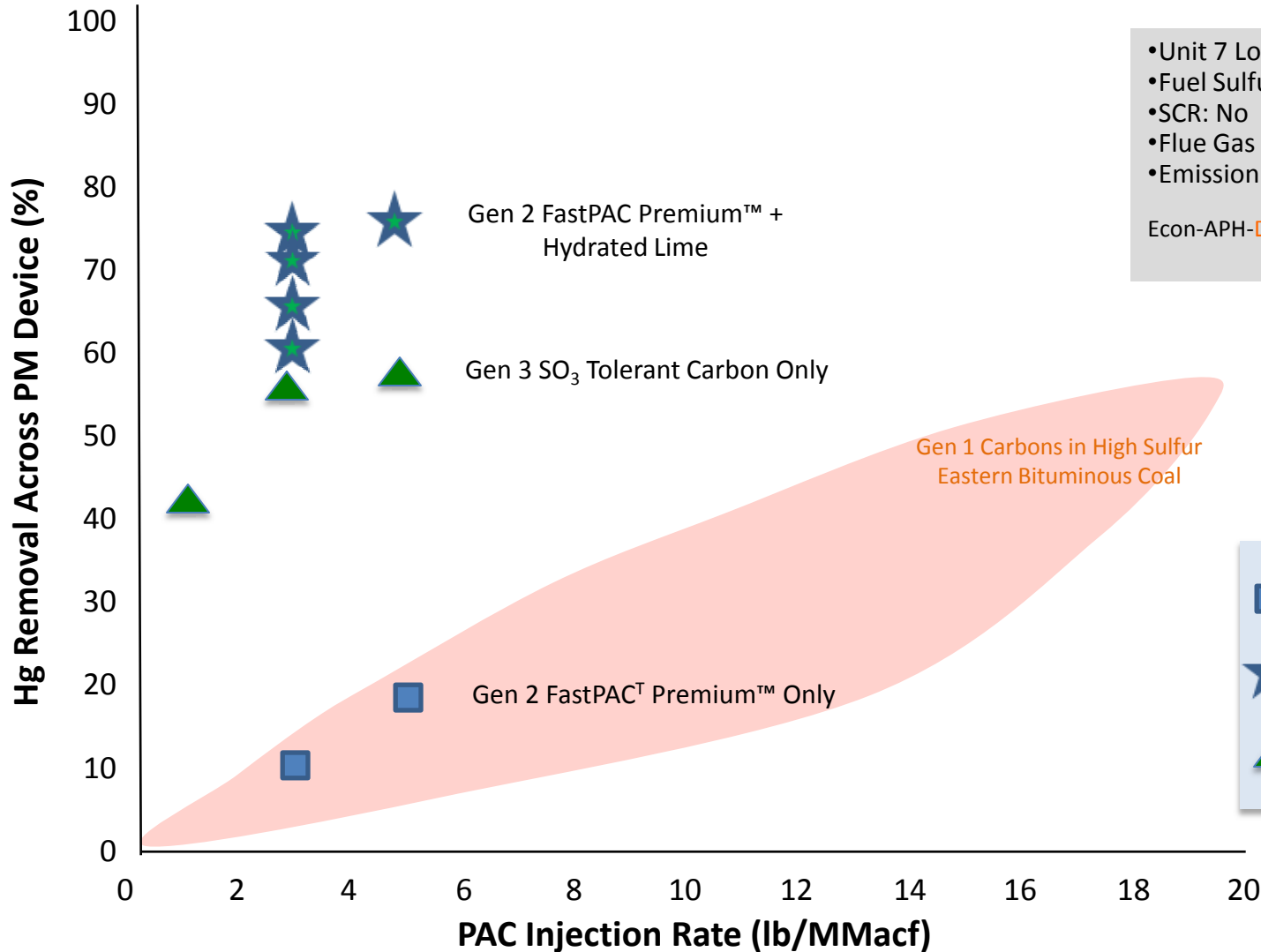
# Southern Plant Hammond: Gen-3 SO<sub>3</sub> Tolerant Carbon For High-Sulfur Bituminous Coal (>15 ppm SO<sub>3</sub>)



- Unit 4 Load: 525 MW
- Fuel Sulfur: 2.8 wt%
- SCR: Yes
- Flue Gas Temperature: 330°F
- Emission Train Configuration:  
Econ-SCR-SAMC-APH-ACI-ESP-WFGD-Stack

- ▲ Gen 3 SO<sub>3</sub> Tolerant Carbon
- ◆ Gen 3 SO<sub>3</sub> Tolerant Carbon + Hydrated Lime

# Southern Plant Gorgas: Developmental Gen-3 SO<sub>3</sub> Tolerant Carbon For Bituminous Coal (~10 ppm SO<sub>3</sub>)



- Unit 7 Load: 100 MW
- Fuel Sulfur: 1.5 – 2.5 wt%
- SCR: No
- Flue Gas Temperature: 310°F
- Emission Train Configuration:

Econ-APH-DSI-ACI-ESP-Stack

- FastPAC Premium™
- ★ FastPAC Premium™ + Hydrated Lime
- ▲ Gen 3 SO<sub>3</sub> Tolerant Carbon

- MATS compliance options for efficient Hg capture for high-sulfur coal are offered by next-generation PACs
  - Combination of sulfuric acid control and ACI enhances mercury removal on high sulfur fuels and complements the performance of FGD co-benefit.
  - Combination of DSI and ACI provide sufficient mercury removal for MATS compliance on sub bituminous and select bituminous coal.
- New Generation-3 ADA Carbon Solutions SO<sub>3</sub> Tolerant carbons allow effective operational options with reduced carbon and DSI requirements

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