

# Memorandum

**Date:** March 14, 2014  
**To:** IRP Intervenors  
**From:** NS Power  
**Subject:** 2014 IRP Analysis Plan

The Analysis Plan was briefly discussed during the technical conference and it is important for stakeholders to consider since it describes the IRP modelling process. Specifically, it describes how the resource plans and future scenarios (worlds) to which the input assumptions will be used in modeling. The Analysis Plan strives to;

- i. identify candidate resource plans, including the least cost plan under the Reference World
- ii. identify a reasonable range of foreseeable futures,
- iii. evaluate the candidate plans including least cost plans across that range of futures and
- iv. select the Preferred Resource Plan.

NS Power has developed the following analysis plan in line with IRP best practices and will continue to refine its plan based on feedback from Synapse and Stakeholders. The Company suggests the 5 following steps:

## **1. Candidate Resource Plans**

- a. Develop a set of candidate resource plans under the Reference World. Begin with a broad range of draft resource plans, each developed based on existing resources and high-level screening of possible resource options.
- b. Optimize each draft resource plan under the Reference World using Strategist. The optimizations would include the resource options that pass the high level screening. The results from Strategist will be candidate resource plans. The results will indicate the relative cost of each resource plan.

## **2. Candidate Resource Plan Evaluation**

- a. Run sensitivity tests under the Reference World on each candidate resource plan from step 1. Strategist may need to re-optimize certain of the resource plans under certain of the sensitivity tests in order for those plans to meet all reliability and regulatory constraints..

### **3. Scenario Testing (“Worlds” Development)**

- a. Develop additional “Worlds” and sensitivities for further evaluation of the candidate resource plans (a World is a combination of key assumptions and constraints). This step includes Worlds of interest to NSPI, Synapse and Stakeholders.

### **4. Evaluation and Optimization**

- a. Evaluate the candidate resource plans from step 1 under the different Worlds and sensitivities. Strategist may need to re-optimize certain of the resource plans under certain of the different Worlds in order for those plans to meet all reliability and regulatory constraints.
- b. The results will indicate the expected relative cost of each resource plan.

### **5. Preferred Resource Plan Development**

- a. Evaluate performance of resource plans across Worlds and select Preferred Resource Plan.

At this point NS Power will have tested and optimized a number of candidate resource plans across a range of foreseeable futures, i.e. “Worlds” based on stakeholder feedback and consultation with Synapse. NS Power would select its Preferred Resource Plan from among those candidate plans. The Preferred Resource Plan should have the flexibility to enable NS Power to meet customer demand and energy requirements, and environmental obligations in a cost-effective, safe and reliable manner across a reasonable range of foreseeable futures. This should enable development of an Action plan for the next 5 years that reflects the type of “course corrections” that may be required depending on how the world (e.g., net load, emissions targets, RES requirements) unfolds.