

INDEPENDENT PROJECT ANALYSIS

# Summary of IPA's Review of the Muskrat Falls Generation Project and Island Link Transmission Project

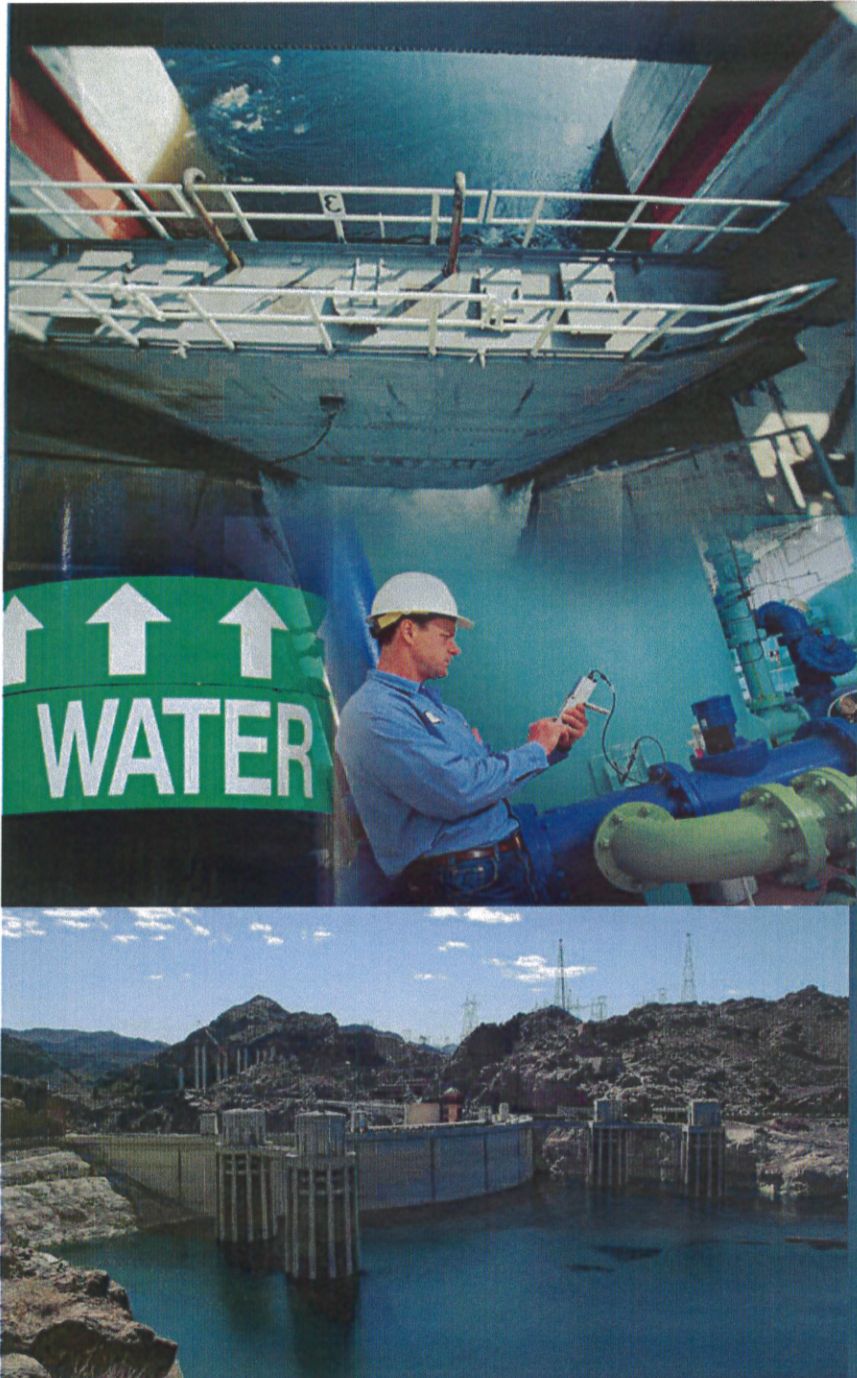
Prepared for Nalcor Energy

September 2010

IPA Reference: NLH-0201-PAC

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## Independent Project Analysis, Inc. (IPA)

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- **IPA was founded 1987 as a research and benchmarking firm devoted entirely to capital projects, and is now a leader in project management research and consulting**
- **IPA's purpose is to improve the competitiveness of our customers through more effective use of capital in their businesses**
- **Clients are in the extractive and manufacturing industries**
  - **Extractive: oil, gas, iron, copper, zinc, diamonds, etc.**
  - **Manufacturing: chemicals, fuels, pharmaceuticals, paper, food processing, consumer products**



## **IPA Proprietary Databases**

*Over 12,000 Projects from 300+ Organizations*

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- **Database contains projects ranging from US\$20,000 to US\$25 billion, represented by many different industries served by IPA**
- **Project Evaluation System (PES®) used to evaluate project outcomes; premise is that outcomes of projects can be predicted by understanding historical relationship between project drivers and project's final outcomes**
- **All information contained in IPA databases is carefully protected and kept as confidential proprietary data**



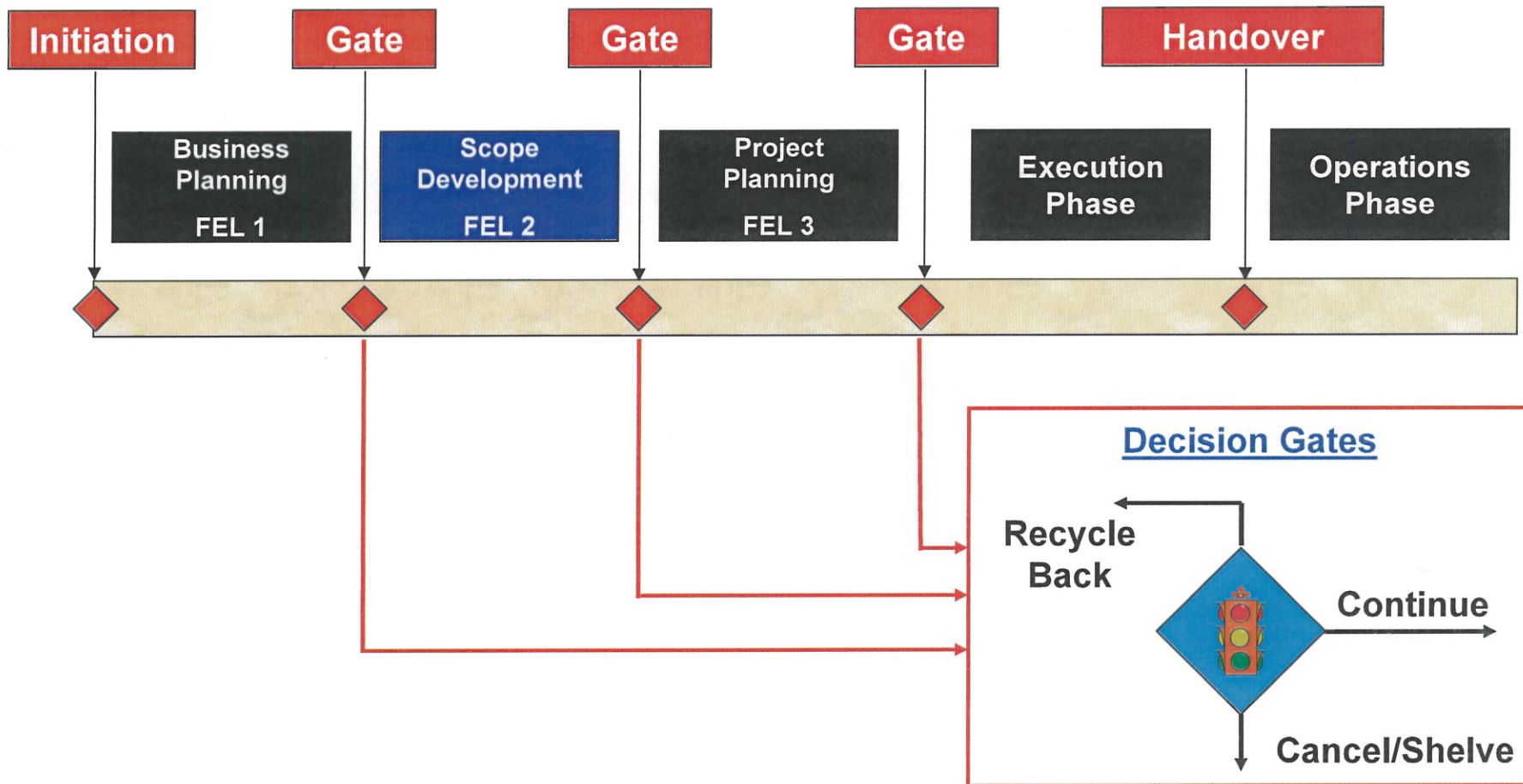
# **Evaluation of the Muskrat Falls Generation Project and Island Link Transmission Project**

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- **IPA performed Pacesetter Evaluation of the project in August/September 2010**
- **Objective of IPA's Pacesetter is to:**
  - **Provide project team with an early interpretation of the drivers and expected outcomes of a project**
  - **Offer specific recommendations for successful completion of the critical project definition phase**
- **Comprehensive interviews performed over 3-day period by IPA representatives**
- **Detailed findings presented to the Nalcor Energy project team**

# Three Phases of Front-End Loading (FEL)

*End of FEL 2 Coincides with Phase 2 of Nalcor Energy's Gateway Process*





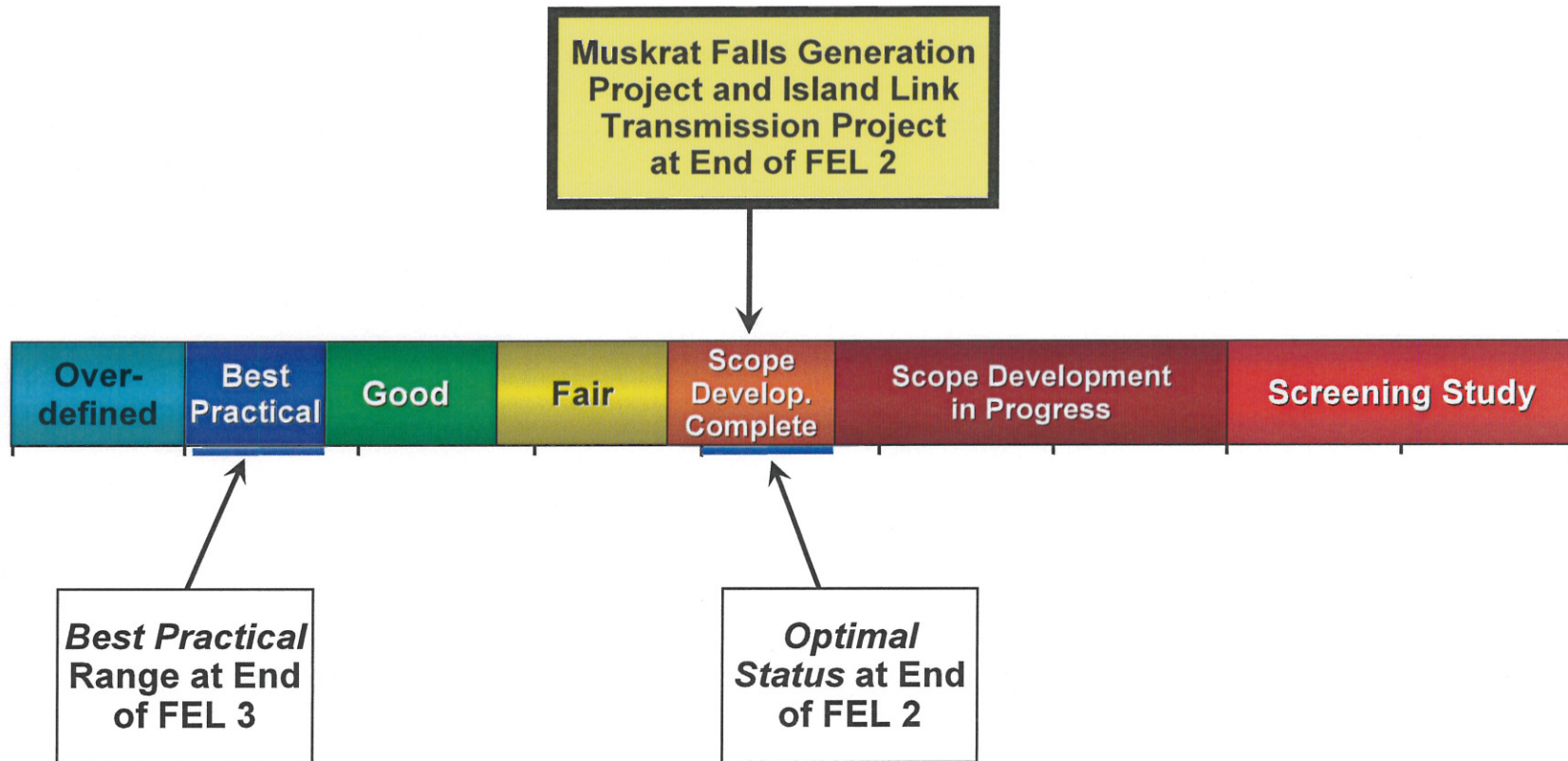
## Key Findings

### *Muskrat Falls Project & Island Link Transmission Project*

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- **Project is better prepared than a typical megaproject at end FEL 2 (Nalcor Energy's Phase 2)**
- **Project has used several Best Practices including, establishing a well-developed team, developing clear objectives, and closing project scope to achieve optimal project definition**
- **Team is highly experienced and highly involved but is misaligned on several key project elements which presents risks and challenges going forward**
- **As owner ramps-up the team and contractors mobilize in next few months, lingering team issues will magnify risks and potentially erode benefits of Best Practices applied thus far**

# FEL Status of Muskrat Falls Generation Project and Island Link Transmission Project at End of FEL 2



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# Recommendations

## *Muskrat Falls Project & Island Link Transmission Project*

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- **Before ramping up for FEL 3, develop specific steps to address and resolve gaps in team alignment and functionality**
- **Continue with plans to develop detail interface management plans that provide clear directions to contractors**
- **To mitigate risk of late changes, implement and strictly adhere to strong change management process, and close all open studies**
- **Adequately plan for labor shortages, which are likely to occur, and follow through on resource loading project schedule**
- **Follow through with plan to increase and maintain active owner involvement throughout project**

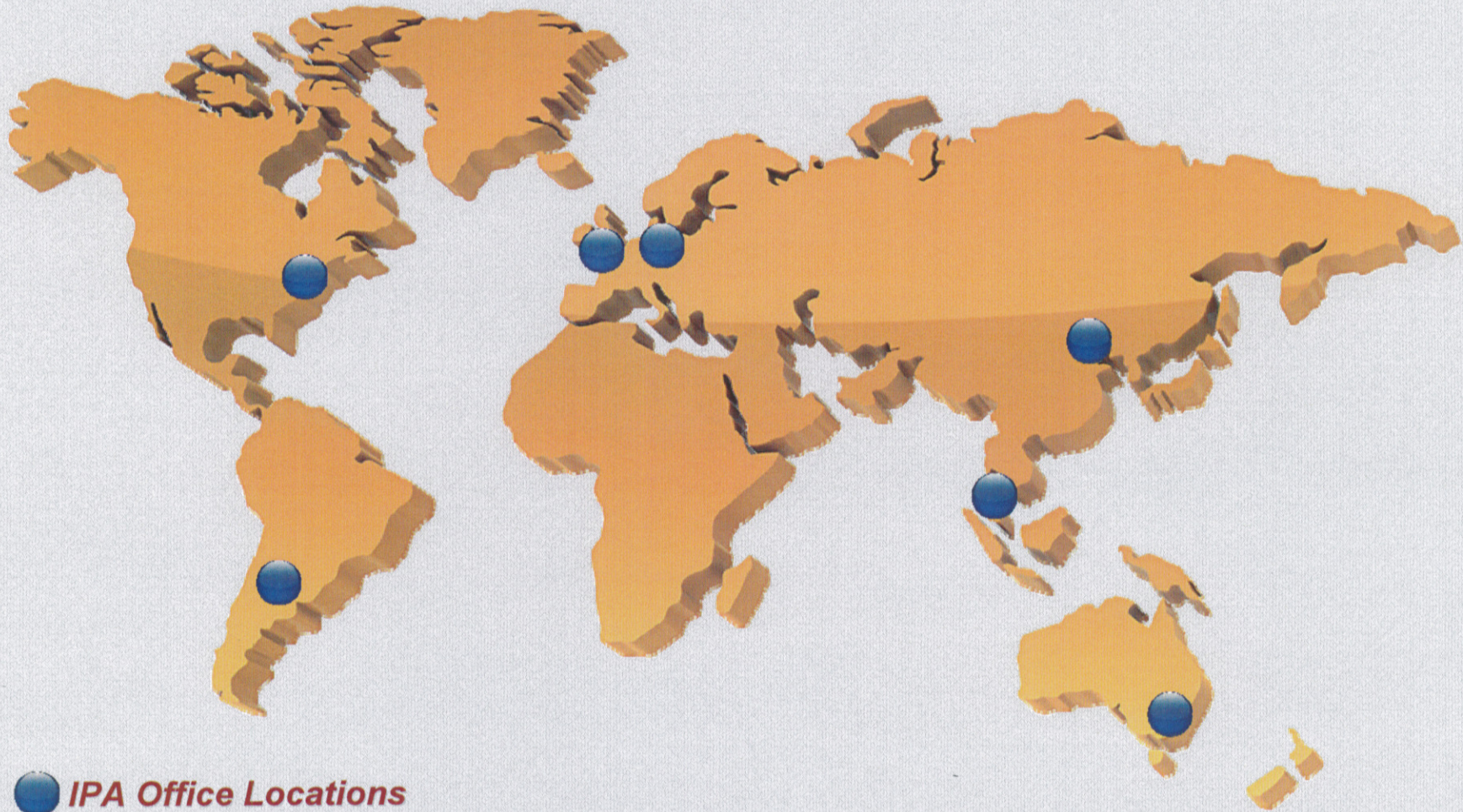


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 **IPA Office Locations**

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