

# GATE 2 INDEPENDENT PROJECT REVIEW

## *Muskrat Falls Generation and Island Link Project*



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# Background

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- IPR part of the phase-gate process
- Helps ensure decision-makers understand the completeness and issues associated with the Phase 2 deliverables on which they will base their decision
- IPR Charter defined 35 Focus Areas
- 1 week effort, 4-person team with complementary and relevant backgrounds; primary activities: document reviews, interviews
- Focus on Muskrat Falls Generation, Island Link (incl. SOBI)
- Functions reviewed:
  - ▣ Finance
  - ▣ Project Engineering
  - ▣ E&AA
  - ▣ Commercial Services
  - ▣ Project Services
  - ▣ Communications
  - ▣ Excludes: Maritime link, Commercial, Gull Island Generation

IPR IS: a high-level independent expert assessment

IPR IS NOT: an audit or validation of the work product

# IPR Team

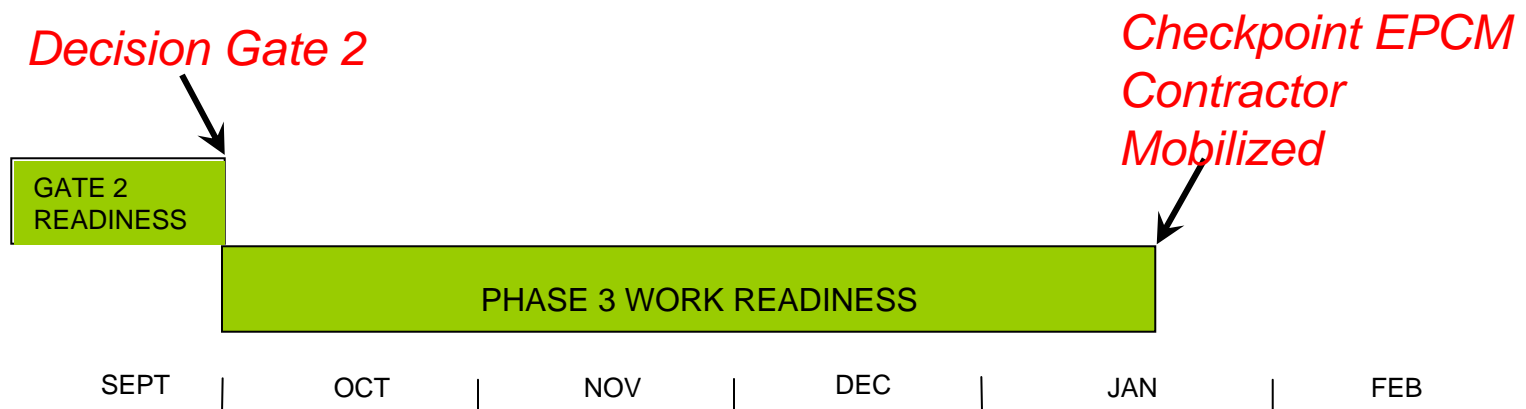
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- The IPR Team consisted of Project Management, Engineering, Construction & Commissioning experts from Canada & the US. With over 150 years of experience to call on.
- **Derek Owen**
  - 40 years of Project Management onshore and offshore with Mobil
  - Has conducted and participated in IPR's for Mobil, ExxonMobil, Husky, Petro Canada Projects
  - Fellow of the institute of Mechanical engineers and a Chartered Engineer UK
- **Richard Westney**
  - Over 40 years experience, certified Project Management Professional
  - Author of 5 books on Project Management
  - A fellow and past President of the Association for the Advancement of Cost Engineering (AACE)
  - A recipient of AACE's Highest Honour, The Award of Merit
  - Internationally Recognized as a source of powerful techniques for planning & executing projects
- **Bernie J. Osiowy**
  - Over 40 years of experience in the planning, design, construction & commissioning of Hydro Electric Generation Stations with Manitoba Hydro.
  - BS – Engineering, Registered Professional Engineer
- **John Mallam**
  - 35 years of experience
  - Vice President of Engineering Services for Hydro
  - Involved in the Design, Construction, Commissioning and Modification of most of Hydro's Generation Facilities
  - Involved in Research and Development with CEA for over 25 yrs
  - Bachelor of Engineering Degree and a Professional Engineer

## IPR Objectives- Gate 2/Phase 3

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- Gate 2 Decision Readiness addresses the Project readiness of deliverables required to pass through Gate 2.
- Phase 3 Work Readiness addresses the planning and preparation work required to be completed after Gate 2 and before the EPCM contractor is mobilized.



# Summary of Findings- Gate 2 Decision Readiness

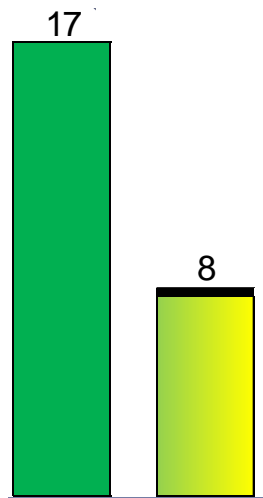
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- Gate 2 Decision Readiness: The quality, quantity and completeness of the work completed in each project function is a sufficient basis for the Gate 2 decision.

*Overall, the project is ready for a Gate 2 Decision.*

- ❖ *Complies with applicable best practice*
- ❖ *Consistent with this project's specifics*

- The Gate 2 Readiness was scored as shown:



*Out of 25 focus areas, 17 were rated as green and a further 8 were marked as green / yellow. This is particularly impressive in light of the recent strategy change to MF first.*

- Green signifies – Fully compliant / best practice*
- Green / Yellow signifies – Compliant with minor ongoing work to be completed*

# Summary of Findings- Phase 3 Work Readiness

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- The Phase 3 work readiness addresses the planning and preparation work required after Gate 2 and prior to the mobilization of the EPCM contractor.
- The Phase 3 work is already underway, significant work has been done, the team has a good understanding of what has to be completed and to augment this the IPR has identified 9 priority focus areas that the Project team shall develop specific plans to address

*Provided the same level of focus is applied timely to these priorities as the Gate 2 readiness deliverables it is expected the project will be ready when it's EPCM Contractor is mobilized.*

- The 9 focus areas are further subdivided into high, medium and low priority as shown on the following slide.

# Summary of Findings- Phase 3 Work Readiness

<b>Recommendations</b>		
<b>Low Priority Action Items</b>	<b>2</b>	<ul style="list-style-type: none"> <li>• Prepare a detailed work scope &amp; first 90 day plan for EPCM Contractor .</li> <li>• Update Labour Relations strategy and proceed with resourcing plans for Labour Relations .</li> </ul>
<b>Medium Priority Action Items</b>	<b>3</b>	<ul style="list-style-type: none"> <li>• Hire HSE Manager and incorporate Safety in Design Principles .</li> <li>• Complete the Phase 3 Budget and AFE .</li> <li>• Develop 6 month staffing plan with appropriate project style policies</li> </ul>
<b>Highest Priority Action Items</b>	<b>4</b>	<ul style="list-style-type: none"> <li>• Detailed plan for Phase 3 Engineering Phase required .</li> <li>• Finalize estimate probability /accuracy value.</li> <li>• Mobilization plan for Phase 3 owners team with accountabilities and responsibilities defined .</li> <li>• Governance Model &amp; Project Policies to be updated and completed for Phase 3.</li> </ul>



## **Spirit of Openness, Cooperation, and Professionalism Throughout**

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IPR Team wishes to thank the LCPMT for extraordinary level of cooperation, openness and professionalism that was displayed by all parties and in all interview sessions.

Documentation was provided timely and efficiently

Support from the organization for logistics, catering etc. was also much appreciated.

## **IPR Team Biographies**

**Derek Owen- RDO Consulting Limited**



Derek has over 40 years experience in project management of oil and gas projects with major EPC contractors and from 1981 to 2002 with Mobil, ExxonMobil where as Project Manager and Manager for East Coast Projects Canada he was responsible for execution of large onshore and offshore projects. As the management committee representative for ExxonMobil he was responsible for Terra Nova, Hebron, and Sable Tier 2 projects.

In 2002 Derek retired from ExxonMobil to set up RDO Consulting Limited to provide Project Management services to the petroleum industry such as, project gate reviews and IPR's, project team alignment workshops and development of project execution strategies, etc. His clients include all the majors involved in projects in Newfoundland and Nova Scotia and major operators in Alberta oil sands projects. His experience with east coast Canada projects covers a period of 20 years.

Derek holds a B.Sc from Nottingham University UK in mechanical engineering, is a Life Member of the Association of Professional Engineers of Nova Scotia, Fellow of the Institution of Mechanical Engineers UK and Chartered Engineer UK.

**John Mallam- Nalcor Energy**



John was appointed to the leadership team as Hydro's Vice President of Engineering Services in March 2006. He joined the Newfoundland and Labrador Power Corporation in 1975 and has been involved in the design, construction, commissioning and modification of most of Hydro's generating facilities.

He has been involved in research and development through the Canadian Electrical Association for over 25 years. He holds a Bachelor of Engineering degree from Memorial University of Newfoundland and is a member of Professional Engineers and Geoscientists of Newfoundland and Labrador.

## IPR Team- Biographical Information

### **Richard Westney- *Westney Consulting Group***



Richard's consulting focus is on Program Strategies and Strategic Risk Management, as well as Executive Learning.

Author of 5 books on project management, Richard Westney is internationally recognized as a source of interesting and powerful techniques for planning and executing projects. He has served as visiting faculty for executive programs at the University of Texas, Texas A&M and Stanford Universities, as well as at The Norwegian University of Science and Technology in Trondheim, Norway.

He founded Westney Consulting Group in 1978 after working on international production, refining, and chemical manufacturing projects for Exxon. A licensed Professional Engineer, he is also a certified Project Management Professional. Richard is a Fellow and Past-President of AACE International (The Association for the Advancement of Cost Engineering), and a recipient of AACE's highest honor, The Award of Merit. He holds a BS in Mechanical Engineering from the City College of New York, an MS in Management Science from Rensselaer Polytechnic Institute, and is also a graduate of the 3-year Owner/President Management Program at Harvard Business School.

### **Bernie J. Osiowy- *Independent Consultant***

Mr. Osiowy has over forty years of experience in the planning, design, construction and commissioning of hydraulic generating stations. During his time with Manitoba Hydro, he was part of the Hydro Power Planning Department which was responsible for the engineering portion of the planning associated with the development of new sources of hydraulic generation. He has a BS – Engineering, from the University of Saskatchewan and is a registered professional engineer, and also a member of the Professional Engineering Association of Manitoba.