



# POWER TALKS

ENERGY EDUCATION SERIES

**A CLOSER LOOK AT SUPPLY OPTIONS**  
**Wednesday, May 10, 2023 | 12 - 2 PM**

We're bringing electricity industry experts and professionals together to share their knowledge and experience in their respective fields. Sessions will cover topics like wind and solar power, hydropower, carbon capture and storage and compressed air storage. We'll also talk about efficiency programs, microgrids and interconnections.

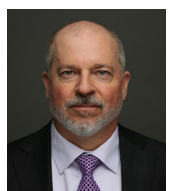
[saskpower.com/powertalks](https://saskpower.com/powertalks)

**OPENING REMARKS**



**Rupen Pandya**

**PRESENTERS**



**John Gorman**



**Andrew Munro**



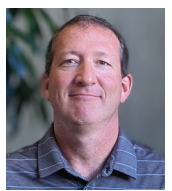
**Brian Brunskill**



**Guy Lonechild**



**Nathan Hoffart**



**Marc St. Laurent**



**Maggie Bratland**



**Conway Nelson**



**Evan Wilson**



**S. Arsalan Asif**



**Ryan Jansen**



**Jay Bick**

### A CLOSER LOOK AT SUPPLY OPTIONS - WEDNESDAY, MAY 10, 2023 | 12 - 2 PM

12 - 12:15 PM	<p>Opening Remarks – Rupen Pandya, President and CEO, SaskPower          Orientation – Lara Ludwig, Manager, Public Engagement and Stakeholder Consultation</p>			
12:20 - 12:50 PM	<p><b>NUCLEAR POWER</b></p> <p><b>John Gorman,</b> Canadian Nuclear Association</p>	<p><b>BUILDING AND CONNECTING THE GRID</b></p> <p><b>Andrew Munro,</b> SaskPower</p>	<p><b>COMPRESSED AIR STORAGE – A SASKATCHEWAN OPPORTUNITY</b></p> <p><b>Brian Brunskill</b></p>	
12:55 - 1:25 PM	<p><b>FIRST NATIONS POWER AUTHORITY</b></p> <p><b>Guy Lonechild,</b> First Nations Power Authority</p>	<p><b>ENERGY EFFICIENCY PROGRAMS</b></p> <p><b>Nathan Hoffart,</b> SaskPower</p>	<p><b>HYDROPOWER IN MANITOBA</b></p> <p><b>Marc St. Laurent,</b> Manitoba Hydro</p>	
1:30 - 2 PM	<p><b>CARBON CAPTURE ON NATURAL GAS – CHALLENGES, OPPORTUNITIES AND APPLYING LESSONS LEARNED</b></p> <p><b>Conway Nelson,</b> International CCS Knowledge Centre</p>	<p><b>WIND AND SOLAR POWER</b></p> <p><b>Evan Wilson,</b> Canadian Renewable Energy Association</p>	<p><b>A NEW SOLUTION FOR SERVING REMOTE COMMUNITIES</b></p> <p><b>S. Arsalan Asif,</b> SaskPower</p> <p><b>Ryan Jansen,</b> Saskatchewan Research Council</p>	<p><b>BATTERY STORAGE</b></p> <p><b>Jay Bick,</b> San Diego Gas &amp; Electric</p>

Register at [saskpower.com/power talks](https://saskpower.com/power talks)

### OPENING REMARKS



#### **RUPEN PANDYA** PRESIDENT AND CHIEF EXECUTIVE OFFICER, SASKPOWER

Rupen Pandya became the President and Chief Executive Officer of SaskPower in 2022.

Before joining SaskPower, Mr. Pandya was the Deputy Minister of Finance and Secretary to Treasury Board for the Government of Saskatchewan.

He has 25 years of public service experience in Saskatchewan, including previous positions as the President and Chief Executive Officer of SaskBuilds, and Assistant Deputy Minister roles with the Ministry of the Economy and the Ministry of Advanced Education, Employment and Immigration.

He holds Bachelor and Master of Arts degrees from the University of Regina.

#### **ABOUT SASKPOWER**

SaskPower is Saskatchewan's leading energy supplier. We're a fully integrated electrical utility and the province's largest Crown Corporation. We serve over 545,000 customers and operate 10 natural gas-fired facilities, 3 coal-fired stations, 8 wind facilities, 5 hydro stations and 3 solar power facilities. Our over 3,000 employees manage more than \$12 billion in generation, transmission and distribution assets and over 157,000 kilometres of power lines.

### ABOUT THIS SESSION

Details to come!

### PRESENTER



#### **JOHN GORMAN** PRESIDENT & CEO, CANADIAN NUCLEAR ASSOCIATION

John Gorman is President & CEO of the Canadian Nuclear Association, past President & CEO of the Canadian Solar Industries Association (CanSIA) and a Director on the board of the Energy Council of Canada (ECC). John served as Canada's Designate to the International Energy Agency's Executive Committee (PVPS) and was a Founder of the Canadian Council on Renewable Electricity (CanCORE). He's using this experience to secure a leading role for nuclear energy at the heart of Canada's energy transition.

Before joining CanSIA, he was the Senior Vice President of Empower Energies, an innovative, global integrator of energy systems. He has served as a director on the boards of numerous community and corporate organizations, including one of the nation's largest electric utilities.

John has been recognized as one of Canada's CLEAN50 and is the recipient of the "40 Under 40" business award for excellence in business practices. He was awarded the designation of Climate Project Ambassador by Nobel Laureate Al Gore in 2008.

### ABOUT THE CNA

The Canadian Nuclear Association (CNA) has been the national voice of the Canadian nuclear industry since 1960. Working with our members and all communities of interest, the CNA promotes the industry nationally and internationally, works with governments on policies affecting the sector and endeavours to increase awareness and understanding of the value nuclear technology brings to the environment, economy and daily lives of Canadians.

### ABOUT THIS SESSION

Take a closer look at the power grid, how it works and the benefits and challenges that come with connecting new projects and our neighbours to the grid.

### PRESENTER



#### **ANDREW MUNRO** ASSET INFORMATION AND TARIFF SERVICES, SASKPOWER

Over the past 12 years Andrew has worked on both the transmission and generation side of SaskPower's business. He is the Manager of Asset Information and Tariff Services and oversees SaskPower's Open Access Transmission Tariff which governs the rules around the fair and open access to SaskPower's transmission system. Andrew is an engineer with an MBA from the University of New Brunswick.

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### ABOUT THIS SESSION

A perceived barrier to the wider adoption of wind and solar energy as sources for electrical generation is the fact that these sources are intermittent in nature. This intermittency can be overcome by storing surplus renewable energy at times when it is abundant, and drawing on this stored energy when required. While batteries are useful for short-term storage (hours), Saskatchewan's advantageous geological conditions and expertise in utilizing rock-salt caverns for natural gas storage warrant serious consideration of the use of Compressed Air Energy Storage (CAES) technology for long-duration storage. CAES technology could potentially provide a cost-effective method of converting intermittent renewable generation to firm capacity (being available on demand) as well as emulating baseload generation. CAES technology is safe, well-understood and produces no toxic waste.

### PRESENTER



#### **BRIAN BRUNSKILL, P. GEO**

Brian Brunskill has provided geological consulting services to the petroleum and potash industries in Canada since 1985. From 2003-06, his work included the geological assessment of deep saline aquifers for the injection and disposal of carbon dioxide and other industrial liquid-waste products. Since 2007, his assessment work has included the potential for mining geothermal heat from deep aquifers in Saskatchewan to be used in direct heating and industrial process applications, and since 2019, the assessment of how CAES technology can be applied within Saskatchewan's geological and power generation infrastructure.

### ABOUT THIS SESSION

Details to come!

### PRESENTER



**GUY LONECHILD**  
CHIEF EXECUTIVE OFFICER, FIRST NATIONS POWER AUTHORITY

Guy Lonechild (White Bear First Nation) is President and CEO of First Nations Power Authority, an organization which connects Indigenous and industry leaders in renewable and alternative energy development. He served as Vice-Chief and Chief of the Federation of Saskatchewan Indian Nations (1999-2008 and 2009-2011), where he oversaw the 25-year Economic Development Strategy.

### ABOUT FNPA

First Nations Power Authority (FNPA) is the only North American non-profit, Indigenous-owned and controlled organization developing power projects with Indigenous communities. FNPA bridges the gaps between industry, government, and Indigenous communities to evaluate and develop Indigenous-owned power generation projects. FNPA leverages project development expertise and its network of industry experts and technical advisors to develop projects resulting in increased economic benefits for First Nation communities.

### ABOUT THIS SESSION

Learn about SaskPower's plans to implement customer energy efficiency programs. Energy efficiency programs provide customers with an effective means to reduce their electricity consumption and lower their power bills. Energy efficiency also helps SaskPower manage its grid from the demand side, rather than only the supply side, and can reduce GHG emissions and mitigate the need to build new generation.

### PRESENTER



#### **NATHAN HOFFART** CUSTOMER SOLUTIONS, SASKPOWER

For more than 11 years Nathan has worked in a variety of roles at SaskPower. He currently leads a team of program managers and engineers who develop strategy and build and implement customer-facing programs and services in the areas of EVs and electrification, distributed generation and storage, demand side management and smart technologies. Nathan is a graduate of the College of Commerce at the University of Saskatchewan.

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### ABOUT THIS SESSION

Nearly all electricity in Manitoba is produced using hydropower that has been developed over the last 100 years and will continue to provide clean, renewable power into the future. This session will provide an overview of hydropower, review the planning and operation of Manitoba Hydro's system, provide advantages and disadvantages of hydropower and review what it took to plan and develop the new Keeyask hydropower station that recently began operating.

### PRESENTER



**MARC ST. LAURENT**  
ENERGY RESOURCE PLANNING, MANITOBA HYDRO

Marc St. Laurent works in the Energy Resource Planning Department at Manitoba Hydro, and has worked in a number of engineering and planning roles over 23 years. Marc has worked on the planning, design, licensing and construction of the last two hydropower stations put into service recently by Manitoba Hydro.

### MODERATOR



**MAGGIE BRATLAND**  
STAKEHOLDER RELATIONS, MANITOBA HYDRO

Maggie Bratland is the manager of Stakeholder Relations at Manitoba Hydro, where she has held a number of positions for the last 15 years. Maggie is passionate about public engagement and works with teams at Manitoba Hydro to build meaningful opportunities for interested parties to inform the decisions that affect them.

### ABOUT MANITOBA HYDRO

Manitoba Hydro is a provincial Crown Corporation and one of the largest integrated electricity and natural gas distribution utilities in Canada. We are a leader in providing renewable energy and clean-burning natural gas. Our energy is primarily generated by 16 hydroelectric generating stations that we operate, supplemented by thermal and wind sources. We serve 608,554 electric customers, and 293,256 natural gas customers.

### ABOUT THIS SESSION

This session will cover:

- Application of carbon capture technology to natural gas generation options
- Technical challenges, application of lessons to reduce risk
- Non-technical challenges faced by carbon capture projects

### PRESENTER



#### CONWAY NELSON

##### VICE PRESIDENT OF PROJECT DEVELOPMENT AND TECHNICAL SERVICES, INTERNATIONAL CCS KNOWLEDGE CENTRE

At the International CCS Knowledge Centre, Conway leads a team of engineers dedicated to advancing carbon capture technology across all industrial sectors. Conway's key focus is on optimizing technology and ensuring client success. Before joining the Knowledge Centre, Conway spent two decades at SaskPower, working as an engineer and project manager on sustainment capital projects for the entire power generation fleet. As a leader for 13 years, he oversaw large teams of engineers and project managers, ensuring the effective delivery of new build and sustainment projects. With a depth of engineering expertise and formidable leadership, management, and communication skills, Conway focuses on fostering strong relationships across various industries, sharing knowledge, and delivering exceptional value to clients. Conway holds a B.Sc. in Mechanical Engineering from the University of Saskatchewan and a Project Management Professional designation from the Project Management Institute.

### ABOUT THE INTERNATIONAL CCS KNOWLEDGE CENTRE

The International CCS Knowledge Centre is a non-profit organization dedicated to advancing large-scale carbon capture and storage (CCS) as a critical means of managing greenhouse gas emissions and achieving the world's ambitious climate goals.

We provide independent, expert advice throughout the lifecycle of CCS projects, based on real-world experience and the latest knowledge from around the world. Our expertise is grounded in hands-on experience from major CCS projects across the globe, including our team's involvement in the development and ongoing optimization of the world's first fully-integrated post-combustion CCS plant - SaskPower's Boundary Dam Unit 3 CCS facility.

### ABOUT THIS SESSION

Details to come!

### PRESENTER



**EVAN WILSON**  
POLICY AND GOVERNMENT AFFAIRS,  
CANADIAN RENEWABLE ENERGY ASSOCIATION

As CanREA's Senior Director, Policy & Government Affairs, Evan Wilson engages with the federal government and the Government of Alberta on behalf of CanREA. He previously served as Senior Director for Alberta and Saskatchewan at CanREA, and as Regional Director, Prairies, for the Canadian Wind Energy Association (CanWEA). Prior to joining CanWEA, he worked for three years with the Canadian Energy Pipeline Association and for four years with Global Public Affairs, where he was a consultant on transportation and energy files. Evan has an MA in Political Science from the University of Calgary. He is based in Calgary.

### ABOUT CANREA

The Canadian Renewable Energy Association (CanREA) was established on July 1, 2020 when the Canadian Wind Energy Association and the Canadian Solar Industries Association united to create one voice for wind energy, solar energy and energy storage solutions. CanREA is the voice for wind energy, solar energy and energy storage solutions that will power Canada's energy future. Our diverse members are uniquely positioned to deliver clean, low-cost, reliable, flexible and scalable solutions for Canada's energy needs.

### ABOUT THIS SESSION

SaskPower currently serves the remote northern community of Descharme Lake via an aging 96-km power line that needs to be rebuilt at an estimated cost of \$8 to \$10 million. Instead of rebuilding this line, SaskPower plans to design and install a stand-alone microgrid near that community at a fraction of the cost. The microgrid is expected to be more reliable and more environmentally-friendly than rebuilding the line.

### PRESENTER



#### **S. ARSALAN ASIF** CUSTOMER SOLUTIONS, SASKPOWER

S. Arsalan Asif is a professional engineer (P.Eng.) with 13 years of experience in industrial, commercial, and residential energy optimization, and demand side management. He has a bachelor's degree in electrical engineering from Ryerson University and is registered with the Association of Professional Engineers and Geoscientist of Saskatchewan (APEGS). He is also a Certified Energy Manager (CEM) and Certified Energy Auditor (CEA) registered with the Association of Energy Engineers (AEE). He is skilled in managing the implementation of energy efficiency, renewable energy and building retrofit projects. He is also adept in facilitating the development of power generation projects that require interconnection such as net metering and microgrids. Arsalan received the 2017 APEGS Environmental Excellence Award for SaskPower's Industrial Energy Optimization Program (2012-2018).



#### **RYAN JANSEN** INTEGRATED ENERGY SYSTEMS GROUP, SASKATCHEWAN RESEARCH COUNCIL

Ryan Jansen received a B.Sc. in Engineering Physics and a M.Sc. in Electrical Engineering from the University of Saskatchewan, with a focus on microgrid reliability. He is a Professional Engineer and the Team Lead of Integrated Energy Systems at the SRC, with Permission to Consult in the areas of Energy Systems and Environmental Monitoring. Ryan has experience in project management, as well as technical expertise in small modular nuclear reactors, microgrids, renewable energy systems, energy storage, remote monitoring systems and district heating systems. Most recently, he has been working on hybrid energy system product development, with a focus on deep decarbonization.

### ABOUT SRC

The Saskatchewan Research Council (SRC) is Canada's second-largest research and technology organization. SRC offers a wide range of services to help broaden clients' energy mix, improve their existing operations and chart their path toward net zero. We work with clients to identify ways to leverage renewable options through integrated energy systems, storage and optimization to improve their operation's energy efficiency and productivity.

### ABOUT THIS SESSION

This session will give a brief overview of SDG&E's energy storage portfolio, how typical sites are arranged and designed, and how they are used/paid for.

### PRESENTER



#### **JAY BICK** CA ELECTRICAL ENGINEER, SAN DIEGO GAS & ELECTRIC

Jay Bick is a professionally licensed CA Electrical Engineer with expertise in power energy systems. For the last five years Jay has been focused on developing various energy storage projects for San Diego Gas & Electric (SDG&E) to serve and to fulfill some of SDG&E's energy supply's procurement requirements. Jay has been a part of contracting, engineering, designing, interconnecting, inspecting, integrating, and commissioning over a dozen large-scale (10+ MW) energy storage facilities for SDG&E. Jay now currently oversees a group of three engineers within SDG&E's Advanced Clean Technology/Generation Development group to design, build and deliver more of these projects.

### ABOUT SDG&E

San Diego Gas & Electric (SDG&E) is a regulated, investor-owned utility operating in the San Diego and Southern Orange County area. SDG&E serves over 3.5 million electric and gas customers having a peak electric load of around 5 gigawatts (GW). SDG&E's region is highly concentrated along the coast, with 90 per cent of our customers living within 30 miles of the Pacific Ocean. SDG&E serves several large military bases including but not limited to the Marine Corps Air Station Miramar, Naval Air Station Miramar, and MCAS Miramar. Over 40 per cent of SDG&E's delivered kWh originated from renewable resources, and SDG&E has over 1.6 GW of customer-owned rooftop solar. SDG&E is owned by Sempra Energy a publicly traded S&P 500 conglomerate which owns several other utility and gas infrastructure companies (IEnova, SoCal gas, Sempra U.S. Gas & power, Cameron LNG, etc.).