Canadian Solar Industries Association

ANNUAL CONFERENCE & EXPOSITION
May 8-9, 2019
BMO Centre, Calgary, Alberta, Treaty 7 Territory

CONFERENCE PROGRAM

#SolarCanada

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- SolarPower International
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SOLAR CANADA 2019 CONFERENCE + EXPOSITION
# TABLE OF CONTENTS + PROGRAM SNAPSHOT

**WEDNESDAY, MAY 8, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00-7:00pm</td>
<td>Exhibition Open</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>9:00-9:15am</td>
<td>Smudge Ceremony</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>9:15-9:30am</td>
<td>Conference Welcome &amp; Opening Remarks</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>9:30-9:45am</td>
<td>Opening Keynote Address: Honourable Amarjeet Sohi, Federal Minister of Natural Resources</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>9:45-10:30am</td>
<td>Plenary: IRENA and the Global Energy Transformation – Gurbuz Gonul</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>10:30-11:00am</td>
<td>Plenary: The New Alberta Government and What It Means for the Solar Industry – Michael Lohner</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>11:00am-12:00pm</td>
<td>Morning Networking Break &amp; Visit the Exhibits</td>
<td>Hall D</td>
</tr>
<tr>
<td>11:10-11:35am</td>
<td>Solar Parking Lot Canopies</td>
<td>Hall D</td>
</tr>
<tr>
<td>11:35am-12:00pm</td>
<td>Project Case Study: Canada’s Largest Off-Grid Solar &amp; Storage Community</td>
<td>Hall D</td>
</tr>
<tr>
<td>12:00-12:30pm</td>
<td>Keynote Luncheon: Clean Growth, Climate Leadership and Canada’s Energy Economy</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>1:30-1:50pm</td>
<td>Increase Solar Output and Yield with Solar Bifacial Technology</td>
<td>Hall D</td>
</tr>
<tr>
<td>1:50-2:10pm</td>
<td>Project Case Study: Saskatchewan’s First Utility-Scale Solar Project</td>
<td>Hall D</td>
</tr>
<tr>
<td>2:10-2:40pm</td>
<td>Developing New Export Opportunities for Canadian SMEs</td>
<td>Hall D</td>
</tr>
<tr>
<td>2:30-3:00pm</td>
<td>Afternoon Networking Break</td>
<td>Hall D</td>
</tr>
<tr>
<td>3:00-3:30pm</td>
<td>Plenary: A Pathway Towards 100% Renewable Energy in Canada – Mark Z. Jacobson, Professor of Civil and Environmental Engineering, Stanford University (via weblink)</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>3:15-3:45pm</td>
<td>Nova Scotia Policies &amp; Programs Update</td>
<td>Hall D</td>
</tr>
<tr>
<td>3:30-4:00pm</td>
<td>Plenary: SaskPower’s Strategic Direction, Challenges, Opportunities – Mike Marsh, President &amp; CEO, SaskPower</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>3:45-4:15pm</td>
<td>Nova Scotia Residential Solar Market Outlook &amp; Labour Force Study</td>
<td>Hall D</td>
</tr>
<tr>
<td>4:00-4:30pm</td>
<td>Plenary: Guy Bridgeman, SVP, Water Canada, EPCOR</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>4:15-5:00pm</td>
<td>2018 Changes to the Canadian Electrical Code</td>
<td>Hall D</td>
</tr>
<tr>
<td>4:30-5:00pm</td>
<td>Plenary: Transitioning from Coal to Solar with Private/Public Partnerships – Mayor Chris Warwick</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>5:00-7:00pm</td>
<td>Happy Hour Reception</td>
<td>Hall D</td>
</tr>
<tr>
<td>7:00pm-12:00am</td>
<td>Solar Palooza</td>
<td>Big Four Roadhouse</td>
</tr>
</tbody>
</table>

**THURSDAY, MAY 9, 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00-3:30pm</td>
<td>Exhibition Open</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>9:00-9:45am</td>
<td>Day 2 Conference Opening</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>9:15-9:45am</td>
<td>Plenary: Energy: Our Past, Our Present and Our Future – Katharine Hayhoe, Professor – Climate Change Center, Texas Tech University (via weblink)</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>9:45-10:45am</td>
<td>Plenary: De-Carbonization, Electrification &amp; the Next Generation Grid</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>10:45-11:15am</td>
<td>Morning Keynote Address “Alberta’s Evolving Electricity System”</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>10:30-11:00am</td>
<td>Getting to Know Electricity Human Resources Canada</td>
<td>Hall D</td>
</tr>
<tr>
<td>11:00-11:30am</td>
<td>Building Sustainable Solar Facilities – The Risk Management Perspective</td>
<td>Hall D</td>
</tr>
<tr>
<td>11:15am-12:30pm</td>
<td>Breakout Session: Exploring Certification Options for Solar PV Installers</td>
<td>Mustang Room</td>
</tr>
<tr>
<td>12:00-1:30pm</td>
<td>Keynote Luncheon – Variable Renewable Electricity &amp; The Energy System of the Future</td>
<td>Palomino Room</td>
</tr>
<tr>
<td>1:15-1:45pm</td>
<td>Technical Overview of Bi-Facial Photovoltaic Modules</td>
<td>Hall D</td>
</tr>
<tr>
<td>1:45-2:15pm</td>
<td>Solar Electricity As Standard In All New Homes</td>
<td>Hall D</td>
</tr>
<tr>
<td>1:45-2:30pm</td>
<td>Distribution-Connected Generation in Alberta – Opportunities and Risks</td>
<td>Arabian Room</td>
</tr>
<tr>
<td>2:30-3:15pm</td>
<td>Interconnection &amp; Metering Options for Load-Sited Solar Electricity</td>
<td>Arabian Room</td>
</tr>
<tr>
<td>3:00-3:30pm</td>
<td>Farewell Dessert Reception</td>
<td>Hall D</td>
</tr>
<tr>
<td>3:30-4:30pm</td>
<td>CanSIA Member Roundtable Discussion: Next Steps for Solar in Alberta</td>
<td>Arabian Room</td>
</tr>
</tbody>
</table>
BECOME A CANSIA MEMBER!

Consider joining CanSIA as a member to stay informed, increase the visibility of your company and influence provincial and federal policies that will affect the future of the solar market in Canada.

CanSIA is the only national trade association for the Canadian solar industry, representing our members on today’s most important issues while positioning the industry for future sustained growth.

Visit [www.cansia.ca/membership](http://www.cansia.ca/membership) to view CanSIA’s Member Benefits and Services brochure or to join online today.

To discuss your membership options with us, please contact:

**CanSIA Membership Team**

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**SOLAR CANADA 2019 CONFERENCE + EXPOSITION**

**AGENDA**

**WEDNESDAY, MAY 8, 2019**

8:00am – 7:00pm  
**REGISTRATION OPEN**  
**HALL D**  
Sponsored by: Hanwha Q CELLS Canada Corp.

11:00am – 7:00pm  
**EXPO HALL OPEN**  
**HALL D**

**9:00 – 9:15am**  
**SMUDGE CEREMONY**  
**PALOMINO ROOM**

Solar Canada 2019 takes place in the traditional territories of the people of the Treaty 7 region in Southern Alberta. The City of Calgary is also home to Métis Nation of Alberta, Region III. Solar Canada 2019 commences with a Smudging ceremony so that attendees become mindful, centred, and grounded in the event. Smudging is a tradition, common to many First Nations and Métis, which involves the burning of one or more medicines gathered from the earth.

**Bruce Starlight**  
Tsuut’ina Language Commissioner  
Tsuut’ina Nation

**9:15 – 9:30am**  
**CONFERENCE WELCOME & OPENING REMARKS**  
**PALOMINO ROOM**

**John Gorman**  
President & CEO  
Canadian Solar Industries Association

**9:30 – 9:45am**  
**OPENING KEYNOTE ADDRESS: HONOURABLE AMARJEET SOHI, FEDERAL MINISTER OF NATURAL RESOURCES & MP FOR EDMONTON MILL WOODS**  
**PALOMINO ROOM**

Solar Canada 2019’s Opening Keynote Address will be delivered by the Honourable Amarjeet Sohi, the Federal Minister of Natural Resources. In his Mandate Letter as Minister of Natural Resources, assigned priorities include: building on the work of Generation Energy which brought Canadians together to envision what a low-carbon energy future looks like and working with provinces and territories to accelerate clean growth strategies and enhance the energy sector’s competitiveness. In this keynote address, Minister Sohi will address how harnessing solar energy fits within Canada’s natural resources sector, and the role that solar energy can play in Canada’s future energy supply. Prior to election as the Member of Parliament for Edmonton Mill Woods in 2015, Minister Sohi was elected three times as an Edmonton City Councillor, where he was dedicated to improving Edmonton’s infrastructure and livability including through the Canadian Urban Transit Association, the Alberta Urban Municipalities Association, Public Interest Alberta, the Centre for International Alternatives, and the Canadian Labour Congress. Minister Sohi has worked tirelessly to promote learning and cooperation among cultural communities by leading the city’s Immigration, Multiculturalism and Racism Free Edmonton initiatives.

**The Honourable Amarjeet Sohi**  
Minister of Natural Resources  
Government of Canada
9:45 – 10:30am  
**PLENARY: IRENA AND THE GLOBAL ENERGY TRANSFORMATION**  
**PALOMINO ROOM**  
Mr. Gurbuz Gonul, Director, Country Support & Partnerships Division at IRENA, will speak about recent IRENA’s work and activities to inform the global energy transformation, including continuing wide- and large-scale deployment of all renewable energy technologies into a smarter electricity grid and electrification of other sectors of the economy, in particular the transportation and the heating sectors. IRENA roadmap to 2050 launched at the Berlin Energy Transition Dialogue, in April 2019, highlighted, amongst other things, the significant role that solar energy technologies will play in achieving the transition to a low-carbon future. He will emphasize the role that innovation will play in the power system transformation to ensure integration of variable renewable energy and enabling technologies, and use of new market design and business models. He will also present IRENA recent findings on socio-economic benefits of renewable energy and the contribution to the continuing growth of our economies.

The International Renewable Energy Agency (IRENA) is an intergovernmental organisation that supports countries in their transition to a sustainable energy future, and serves as the principal platform for international cooperation, a centre of excellence, and a repository of policy, technology, resource and financial knowledge on renewable energy.

![Gurbuz Gonul](image)

**Gurbuz Gonul**  
Director, Country Support and Partnerships  
International Renewable Energy Agency (IRENA)

10:30 – 11:00am  
**PLENARY: THE NEW ALBERTA GOVERNMENT AND WHAT IT MEANS FOR THE SOLAR INDUSTRY**  
**PALOMINO ROOM**  
With a new government in Alberta comes a new political agenda. So, what does this mean for the Alberta solar industry and electricity sector today and going forward? What does it mean for existing solar related policies and programs? What should be the new solar story that we share?

In this can’t miss presentation, delivered by **Michael Lohner, Partner, Crestview Strategy**, accomplished government relations, public policy, and strategic planning consultant, attendees will get an overview of what we can expect from this new government. Further, Mr. Lohner will provide a better understanding of the challenges our industry may face while also providing insight into the opportunities the solar sector can leverage.

![Michael Lohner](image)

**Michael Lohner**  
Partner  
Crestview Strategy

11:00am – 12:00pm  
**MORNING NETWORKING BREAK & VISIT THE EXHIBITS**  
**HALL D**

11:10 – 11:35am  
**LONGI SOLAR LEARNING POD: SOLAR PARKING LOT CANOPIES**  
**HALL D**  
Solar parking lot canopies have been deployed in the US, at least partly because canopies provides shade to parked cars, which is valued in hotter climates. In Canada they are still rare partly because they may make parking lot snow removal more difficult. Yet there are many reasons for building owners and site developers to examine this option in detail, in particular with respect to net zero energy and net zero carbon buildings: as the number of storey’s of a building increase, it is harder to meet its energy demands with rooftop solar alone. This talk, delivered by **Joan Haysom, Innovative Energy Market Chief, J.L. Richards & Associates**, will examine the design parameters from multiple points of view, including: PV system and performance (orientations, module type, etc.), the net zero energy equation, and from a site planning point of view (architecture, water and snow management).

11:35am – 12:00pm  
**LONGI SOLAR LEARNING POD: PROJECT CASE STUDY: CANADA’S LARGEST OFF-GRID SOLAR & STORAGE COMMUNITY**  
**HALL D**  
Fort Chipewyan is a remote, off-grid community located in Northeast Alberta that consumes more than three million litres of diesel fuel per year for electricity generation. In 2020, the community will displace 800,000 litres of diesel fuel per year with 2.6 MW of solar electricity generation and 1.5 MWh of batteries. Attend this project case study to learn how three Nations are partnering with ATCO to complete the project – presentation delivered by **Ryan Anderson, Project Manager, ATCO** and **Clayton Stafford, Senior Partner, Greenplanet Energy Analytics**.
12:00 – 1:30pm  
KEYNOTE LUNCHEON: CLEAN GROWTH, CLIMATE LEADERSHIP AND CANADA’S ENERGY ECONOMY  
Sponsored by Calgary Economic Development  

12:15 – 12:30  
**Plenary: Maximizing Canada’s Energy Advantage**  
Global tectonic shifts are taking place in the energy sector. The dramatic decline in the cost of renewables – especially solar – is creating an irreversible momentum toward cleaner energy as we transition to a low-carbon future. With its energy resources, technologies and expertise, Canada is ready and in a great position to play a leadership role in guiding this transition. Though Generation Energy, Canadians have told the government they want a thriving, low-carbon economy with affordable and reliable energy systems. In this context, Mr. Jay Khosla, Assistant Deputy Minister, Energy Sector, Natural Resources Canada, will present the Government of Canada’s strategy for a sustainable energy future, clean economic growth and job creation, and outline the role of the solar industry in this transition.

12:30 – 1:15  
**Panel Discussion: Climate Leadership In Our Energy Economy: Contradiction or Competitive Advantage?**  
Balancing economy and environment is arguably the greatest challenge of the 21st Century. While Canada is only responsible for less than 2% of global annual greenhouse gas emissions, Canadians emit the most per capita among all G20 members. While Canada has committed to reducing greenhouse gas emissions by 30% below 2005 levels by 2030, it is proving difficult to bend the emissions growth curve with a growing population and economy. While Canada’s electricity supply is the cleanest among all G20 members, we are also home to the world’s third largest oil reserves and significant gas deposits. Can these points and counter-points be resolved? This keynote luncheon panel discussion moderated by Mary Moran, President & CEO, Calgary Economic Development and with panelists: Jay Khosla, Assistant Deputy Minister, Energy Sector, Natural Resources Canada; Peter Tertzakian, Executive Director, ARC Energy Research Institute; and Chris Turner, Author of “The Patch: the People, Pipelines & Politics of the Oil Sands” will explore whether, how and if, climate leadership in our energy economy is a contradiction or a competitive advantage.

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Megan Zimmerman | 403 803 1913
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Rapid technological change is leading to solar PV systems that can achieve greater performance at drastically lower costs, compared to just a few short years ago. Going forward, the quality and reliability of solar PV systems will become even more critical to ensure consistent performance and output. One crucial decision includes choosing the right module technology to reduce the balance of system costs, improve system energy yield while helping generators achieve the lowest possible Levelized Cost of Electricity (LCOE).

In this presentation, delivered by Tommy Bian, Technical Service Manager, LONGi Solar Technology Co., learn more about mono and bifacial solar module technologies and how they can improve both solar PV system performance and lower cost with higher power output, higher energy yield, and better reliability.

The Highfield Solar Project is located just Southeast of Swift Current in the Rural Municipality of Coulee in Saskatchewan and will be Saskatchewan’s first utility-scale solar project having been selected as the successful bidder in SaskPower’s first competitive procurement. Attend this project case study delivered by Dave Carscadden, Senior Project Developer, Saturn Power Inc. to learn more about this project.

“CanExport” provides direct financial assistance to small and medium-sized businesses (SMEs) registered in Canada to help them develop new export opportunities and markets, especially high-growth emerging markets. CanExport provides financial support for a wide range of export marketing activities, including, but not limited to: business travel to target markets; participation at trade fairs and trade missions; adaptation of marketing tools for new markets; intellectual property protection, certification, or adaptation of contracts for target markets; business, tax or legal advice for target markets; and market research. CanExport reimburses up to 50 percent of eligible expenses but requires that applicants match funds on a one-to-one basis and is delivered by the Trade Commissioner Service (TCS) of Global Affairs Canada, in partnership with the National Research Council of Canada’s Industrial Research Assistance Program (NRC-IRAP); CanExport provides financial support for a wide range of export marketing activities. Attend this leaning pod session delivered by Ian Williams, Trade Commissioner – Renewable Energy, Global Affairs Canada to learn more about CanExport and ow it could help your business reach new markets.

Mark Z. Jacobson is a Professor of Civil and Environmental Engineering at Stanford University in California. He has also developed roadmaps to transition countries, states, cities, and towns to 100% clean, renewable energy for all purposes and computer models to examine grid stability in the presence of high penetrations of renewable energy. In this Solar Canada presentation, Mark Jacobson will focus on how Canada can transition to 100% renewable energy, identifying the percentage for each of the energy sectors, while highlighting how power demand and costs can be reduced as a result. He views Canada’s most significant advantage is our vast amount of hydro water power which can act like a big peaking power battery.

In 2017, Nova Scotia launched its first solar program – the Solar Electricity for Community Buildings Pilot Program – with the aim of engaging community groups to benefit from solar energy. The Province has since launched a new residential rebate in partnership with Efficiency Nova Scotia, and has invested in training, research, public engagement and grassroots projects to support Nova Scotia’s growing solar industry. Attend this presentation delivered by Sheena Parris, Policy Analyst, Nova Scotia Department of Energy and Mines, to learn more.
### PLENARY: SASKPOWER’S STRATEGIC DIRECTION, CHALLENGES, OPPORTUNITIES – MIKE MARSH, PRESIDENT & CEO, SASKPOWER

**Palomino Room**

The electricity industry is facing great transformation. Technology disruption, developing environmental regulations and increasing expectations around building a cleaner energy future are all priorities that are supporting this change. Mike Marsh, President and CEO of SaskPower, will discuss what is driving the company’s strategic direction and the challenges and opportunities that lie ahead.

**Mike Marsh**
President and Chief Executive Officer
SaskPower

### LONGI SOLAR LEARNING POD: NOVA SCOTIA RESIDENTIAL SOLAR MARKET OUTLOOK & LABOUR FORCE STUDY

**Hall D**

Dunsky was engaged by the Canadian Solar Industries Association (CanSIA) to develop a Market Outlook and Labour Force study for the Nova Scotia residential solar market. **Ahmed Hanafy from Dunsky** will be presenting key results from the study relating to market potential for residential solar deployment to 2030, assessment of the solar supply chain in Nova Scotia and associated local job creation potential, as well as skills and training considerations to prepare the local labour force to meet projected market demand.

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PLENARY: GUY BRIDGEMAN, SVP, WATER CANADA, EPCOR  
PALOMINO ROOM

EPCOR owns and operates the water utility in the City of Edmonton. Water utility rates are regulated by the City. The City has adopted an Energy Transition Strategy under which it has established a goal of sourcing 10% of its own electricity requirements from new, renewable sources in the Edmonton region. As regulator of the water utility, the City approved a green cost rider on water rates to enable EPCOR to achieve Energy Transition Strategy goal in respect of electricity use in its water utility.

EPCOR is in the final stages of permitting a 10 MW solar farm (44k solar panels) on 55 acres of land be adjacent to EPCOR’s E.L. Smith Water Treatment Plant in southwest Edmonton. This “behind the meter” plant will produce approximately 20,000 MWhs annually or about 45% of the plant’s annual electricity use. EPCOR has also been awarded $12.6 M in Federal and Provincial grant funding to include a 6 MW Battery Energy Storage System to create a unique behind the meter micro grid that integrates the solar farm and the plant electricity load with battery storage. EPCOR is working with community partners to make this an active and accessible research and education demonstration site. The talk will focus on the development project including permitting a large solar facility in an urban setting.

LONGI SOLAR LEARNING POD: 2018 CHANGES TO THE CANADIAN ELECTRICAL CODE  
HALL D

The 2018 Canadian Electrical Code introduced changes that affect the grid-integration of solar electricity generation and energy storage in Canada. Attend this Solar Canada 2019 Learning Pod session delivered by Eric Smiley, Principal, Reid Wylde Engineering Ltd. and member of the Section 64 Sub-committee for the Canadian Electrical Code, to gain an understanding of the most significant impacts including rapid shutdown requirements and photovoltaic disconnect means in addition to new labeling and marking requirements, arc-fault protection, grounding and equipment bonding.

PLENARY: TRANSITIONING FROM COAL TO SOLAR WITH PRIVATE/PUBLIC PARTNERSHIPS – MAYOR CHRIS WARWICK  
PALOMINO ROOM

Hanna is a town in east-central Alberta with a population of less than 3,000. While a few enterprising homesteaders opened surface veins of Horseshoe Canyon coal with pick-axes, it wasn’t until Sheerness coal-fired electricity generation plant became operational in 1986 that significant coal-mining began in the area. With the regulated phase-out of coal-fired electricity in Alberta by 2030, the future social and economic well-being of the town has been thrown into jeopardy. Attracting new businesses and supporting workers to transition their skills to new jobs to the town of Hanna is a priority for Mayor Chris Warwick. In this Solar Canada 2019 afternoon plenary, Mayor Warwick will discuss the impact that climate policy has had on his community and how one opportunity that could offset some of those impacts is the Hanna Solar Project, a 120 MW private/public partnership that will generate revenues for the Hanna Community Coal Transition Fund.

Chris Warwick  
Mayor  
Town of Hanna, Alberta

HAPPY HOUR RECEPTION  
HALL D  
Sponsored by: Panasonic

We ignite the fun in our Solar Plaza to start your night off right. The best business relationships are bonded in the informal networking setting.

SOLARPALOOZA  
BIG FOUR ROADHOUSE  
Sponsored by: PCL

SOLARPALOOZA – is back again this year and bigger and better than ever!  

The event has been moved within the Calgary Stampede grounds to the Big Four Roadhouse! Just a short walk from the BMO Centre building.

This event includes two drink tickets and food stations but the networking opportunity makes it priceless!

If you have a full conference pass – your badge gets you in!

Tickets available at registration but not at the door!
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AGENDA THURSDAY, MAY 9, 2019

8:30am – 3:30pm  REGISTRATION OPEN  HALL D  Sponsored by: Hanwha Q CELLS Canada Corp.

10:00am – 3:30pm  EXPO HALL OPEN  HALL D

9:00 – 9:15am  DAY 2 CONFERENCE OPENING  PALOMINO ROOM

Wesley Johnston
Vice President
Canadian Solar Industries Association

PLENARY: ENERGY: OUR PAST, OUR PRESENT AND OUR FUTURE  PALOMINO ROOM
The fossil fuels that powered the Industrial Revolution, and the technological and medical advances that resulted, significantly improved the duration and quality of our lives. Today, our energy systems are already well into a second transformation nearly as fundamental as that between the pre-Industrial era and today, from fossil fuels to clean energy: solar, wind, geothermal, tidal and even innovative new nuclear and storage. Until now, this transition has been driven primarily by advances that have made the technology increasingly accessible and affordable around the world. Now, however, that transition is being accelerated by the increasing risks that human-caused climate change poses to people, infrastructure, food, water, and more right here in Canada and across the world. Join Katharine Hayhoe as she discusses the past, our present, and the future of energy supply in a changing climate.

Katharine Hayhoe
Professor – Climate Change Center
Texas Tech University

9:45 – 10:45am  PLENARY: DE-CARBONIZATION, ELECTRIFICATION & THE NEXT GENERATION GRID  PALOMINO ROOM
Canada’s “Mid-Century Long-Term Low-Greenhouse Gas Development Strategy” submitted to the United Nations Framework Convention on Climate Change (UNFCCC) identifies key objectives and building blocks that could underlie our transition to an economy with 80% lesser annual greenhouse gas emissions in 2050 than in 2005. In all scenario, electricity supply is de-carbonized and demand for fossil fuels in transportation, buildings and industry is minimized through efficiency and then displaced with non-emitting electricity. In these scenario, electricity demand reaches more than twice current levels by 2050. Attend this Solar Canada 2019 plenary panel discussion moderated by James Glave, Principal, Glave Communications and with panelists Chris Bataille, Adjunct Professor, Simon Fraser University; John Rilett, Director, Energy Solutions, ENMAX; Anne Smart, VP of Policy for North American Policy, ChargePoint; and Matthew Williams, CTO & Founder, Faraday Grid and Emergent, for a broad discussion of the opportunities and challenges that de-carbonization and electrification poses for the solar and storage industry and for the next generation grid.

Wesley Johnston
Vice President
Canadian Solar Industries Association

Katharine Hayhoe
Professor – Climate Change Center
Texas Tech University

Chris Bataille
Adjunct Professor, Simon Fraser University

John Rilett
Director, Energy Solutions, ENMAX

Anne Smart
VP of Policy for North American Policy, ChargePoint

Matthew Williams
CTO & Founder, Faraday Grid and Emergent
10:30 – 11:00am  **LONGI SOLAR LEARNING POD: GETTING TO KNOW ELECTRICITY HUMAN RESOURCES CANADA**, HALL D

Electricity Human Resources Canada (EHRC) is a national, not-for-profit organization that conducts research focused on the human resource challenges and opportunities impacting the electricity and renewable industry and develops tools to support industry in addressing these challenges and opportunities. Since 2005, EHRC has been a trusted source of objective human resource information, marketing information and tools to help the Canadian electricity industry grow and remain innovative while improving the quality of electricity service to Canadians. Industry players—from business, government, academia and organized labour—use our resources to make informed decisions and manage their organizations more effectively. Above all, we provide evidence-based solutions to the human resource challenges facing the electricity and renewable energy industry.

During this session presented by **Kim MacLaren, EHRC Project Manager** and **Jillian Karner, EHRC Project Coordinator**, attendees will learn more about the numerous EHRC initiatives and projects that will engage solar industry employers, educators and employees alike, including: our National and Targeted Labour Market Information (LMI) Projects; the Empowering Futures initiative, a work integrated learning initiative that provides wage subsidies to employers who hire students; our Annual Awards of Excellence and our Functional Analysis and National Occupational Standards, where we will be developing competencies, Essential Skills and Physical Demands Assessments for Solar PV Installer, Solar Thermal Installer, and Small System Designer (Solar).

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10:45 – 11:15am  **MORNING KEYNOTE ADDRESS “ALBERTA’S EVOLVING ELECTRICITY SYSTEM”**, PALOMINO ROOM

Alberta’s phase-out of coal-fired electricity and the introduction of a legislated target of 30% of electricity produced from renewable energy resources by 2030 has accelerated the pace of change in Alberta’s electricity sector. Market design and power system planning are being reconsidered while the industry seeks innovative ways to integrate higher amounts of variable renewable generation and energy storage technologies. Attend this Solar Canada 2019 morning keynote address from **Elizabeth Moore, Vice-President, Commercial, Alberta Electric System Operator (AESO)** to hear of the status and progress of several activities being undertaken by the AESO that will affect the market-participation and grid-integration of solar electricity generation and energy storage at all scales in Alberta for years to come.

![Elizabeth Moore](image)

Elizabeth Moore  
Vice-President, Commercial  
Alberta Electric System Operator (AESO)

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11:00 – 11:30am  **LONGI SOLAR LEARNING POD: BUILDING SUSTAINABLE SOLAR FACILITIES – THE RISK MANAGEMENT PERSPECTIVE**, HALL D

This presentation will explore and discuss considerations for long term asset ownership with minimal disruption to cash flow taken from a risk management perspective. Delivered by **Jen Aitchison, Senior Vice President, Sustainable Energy Practice**, Hugh Wood Canada, **Steve Schmelzle, Senior Construction and Energy Underwriter, Royal & Sun Alliance**, **Walter Schachtschneider, Senior Manager, PCL Construction**, and **David Asling Snee, President, Northwind Solutions**, we will look at other markets and lessons learned that can be applied to the Alberta market on how to avoid costly oversights in contract/warranty verbiage, implications of siting and component selection including spare parts and how much risk can you really offload to others ie; EPC’s, Manufacturers, Insurers etc. Get to know what business risks are you truly exposed to and how to effectively manage them.

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11:15am – 12:30pm  **BREAKOUT SESSION: EXPLORING CERTIFICATION OPTIONS FOR SOLAR PV INSTALLERS**, MUSTANG ROOM

**Sponsored by: Electricity Human Resources Canada**

With tremendous solar industry growth comes a tremendous opportunity to create skilled solar related jobs and careers. It is essential to ensure that solar installation technicians are properly trained and qualified to safely install solar systems and protect consumers, thus creating a level of quality assurance and professionalism in the industry as it reaches its growth potential. Proper training and certification helps to further lower overall solar installation costs, as best practises are defined and adopted making solar energy even more accessible to more Canadians. A national certification program would also enable solar installers to be mobile and work across Canada to supply the market where demand is greatest. Furthermore, provincial and municipal governments are increasingly exploring solar energy as a solution to their economic and climate change challenges and are seeking a recognized and qualified solar labour force to implement and deliver on solar energy programs.

This working-group session, facilitated by **Kim MacLaren, Electricity Human Resources Canada (EHRC) Project Manager**, will bring together Solar PV Installers/Employers and key stakeholders from across the country to discuss the potential/feasibility of a Canadian Solar PV Installer Certification program. Guided discussions will centre around topics such as: perceived benefits of certification to the Canadian Solar industry; potential pitfalls or challenges associated with a national certification; suggested certification program requirements (e.g. training and assessment requirements); as well as best practices from other certification programs from various jurisdictions and industries.
12:00 – 1:30pm  KEYNOTE LUNCHEON - VARIABLE RENEWABLE ELECTRICITY & THE ENERGY SYSTEM OF THE FUTURE  PALOMINO ROOM  
Sponsored by: FortisAlberta Inc.

The Keynote Address is scheduled between 12:30 pm – 1:00 pm

Driven by the economics and growth of renewable energy, the global energy industry is expanding its scope beyond today’s electricity system to include interrelationships with natural gas systems, transportation systems, and a wide range of other energy and infrastructure pathways. This expanding perspective around energy, and the growing need for coordination across the ways that we produce, convert, deliver and use energy, is the core of the Energy Systems Integration opportunity.

Energy Systems Integration (ESI) is the process of coordinating the planning and operation of energy systems across multiple pathways and/or geographical scales to deliver reliable, cost effective energy services with minimal impact on the environment. Charlie Smith is the Executive Director of the Energy Systems Integration Group (ESIG), an association that takes a total system view of the energy systems we use today, focusing on the combined strength of electricity, heat and fuel systems. Tapping into the combined strength of energy systems maximizes the value of every unit of energy being used for power, heat, water, commercial/industrial, residential and transportation purposes. Through collaboration and coordination, ESIG addresses the technical challenges associated with integrating multiple energy systems to enable clean, reliable, and affordable energy systems worldwide. Without the energy systems integration perspective, the full potential of renewable energy will never be reached.

Mr. Smith is a member of the IEEE Power and Energy Society; a member of CIGRE, the International Council on Large Electric Systems; a member of the American Meteorological Society; and a Fellow of the IEEE. He received his BSME and MS degrees from MIT in 1970. He has over 40 years of experience in the electric power industry. Mr Smith’s keynote address will discuss decarbonization and electrification trends in the United States including the complementarity of solar and wind energy resources, solutions to maximizing the penetration of variable renewable electricity generation on the electricity system including energy storage, and the opportunities in electrifying transportation, buildings and industry.

1:15 – 1:45pm  LONGI SOLAR LEARNING POD: TECHNICAL OVERVIEW OF BI-FACIAL PHOTOVOLTAIC MODULES  HALL D

Bifacial photovoltaic modules feature a transparent back sheet enabling production via irradiance from both the front and rear surfaces. This technology is rapidly advancing and offers the potential for significant performance increases relative to traditional mono-facial modules. Attend this Solar Canada 2019 Learning Pod session with Roberto Martinez, Renewable Energy Specialist, from WSP Canada to gain an understanding of this technology at it relates to modelling, design and deployment considerations in the Canadian market.

1:45 – 2:15pm  LONGI SOLAR LEARNING POD: SOLAR ELECTRICITY AS STANDARD IN ALL NEW HOMES  HALL D

Jayman BUILT, Alberta’s largest homebuilder, have announced that all new homes that they build in Calgary and Edmonton will include rooftop solar electricity generation as standard starting in 2019. Attend this Learning Pod session at Solar Canada 2019 delivered by David Desormeaux, President & COO, Jayman BUILT to gain an understanding of the value, affordability and environmental performance selling points that buyers of new homes see in this offering and its practical implications for the design and construction of new homes in Alberta today.
1:45 – 2:30pm  DISTRIBUTION-CONNECTED GENERATION IN ALBERTA – OPPORTUNITIES AND RISKS  ARABIAN ROOM

Connecting generation to the Alberta distribution system provides a number of potential benefits to the transmission grid and to the province in general. In some cases, distribution-connected generators (DCG) receive additional revenues due to their locations on the system.

In May of 2018, the Alberta Electric System Operator (AESO) released “Information Document 2018-019T” (the “ID”) with the stated intention of reducing the revenue opportunity for distribution-connected generation by replacing the long-standing practice of "substation totalization" with "feeder-level totalization" for transmission tariffs (This has implications for FortisAlberta’s “Option M,” GUOC, and customer contributions). This ID has been a contentious issue in the recent tariff proceeding. Other AESO tariff effects, particularly around “substation fraction” charges serve to disadvantage distribution-connected generation. This proceeding is almost over and a final ruling is expected in approximately three months.

Attend this breakout session presented by Christine Runge, Senior Consultant, Power Advisory LLC and Joe Peters, Principal Consultant, Peters Energy Solutions Inc to gain a greater understanding of tariff opportunities and risks for distribution-connected generation facilities and how CanSIA is working to impact the future of DCG in Alberta.

2:30 – 3:15pm  INTERCONNECTION & METERING OPTIONS FOR LOAD-SITED SOLAR ELECTRICITY  ARABIAN ROOM

There are multiple options to interconnect and meter solar electricity generated at a load site including: “net-metering”; “net-billing”; and “load displacement”. In some cases the approach is dictated by a customer’s demand profile and system siting considerations. In other cases the approach is dictated by the local policy and regulatory framework. Attend this Solar Canada 2019 breakout session presented by Fidel Reijerse, President, RESCO Energy Inc. to gain a greater understanding of the multiple options to interconnect and meter load-sited solar electricity generation and their impact on system design, component selection and economics. In addition, a case study of a portfolio of 5 rooftop solar facilities in 3 Canadian jurisdictions with a total installed capacity of 4 MW will be presented for a real world example of the opportunities and challenges for the on-site consumption of solar electricity in Canada today.

**ENERGIZING THE FUTURE**

FortisAlberta is excited to investigate the use of utility-scale battery energy storage for Waterton. This project will enable FortisAlberta to test the technology, economics and collective distribution grid benefits of solar PV, utility scale battery storage, smart inverter, SCADA and grid operating systems.

We look forward to connecting with you at our booth, as a proud sponsor of the 2019 Solar Canada Conference and Exposition.

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FortisAlberta 310-WIRE (9473)
AGENDA  THURSDAY, MAY 9, 2019

3:00 – 3:30pm  FAREWELL DESSERT RECEPTION  HALL D  Sponsored by: Grasshopper Solar
Parting is bittersweet – so join us for a treat or a cup of coffee before we have to say good-bye. We’ll make it worth your while – always a nice surprise to wrap up your time with us.

3:30 – 4:30pm  CANSIA MEMBER ROUNDTABLE DISCUSSION: NEXT STEPS FOR SOLAR IN ALBERTA  ARABIAN ROOM
With a new government in Alberta comes a new political agenda. So, what does this mean for the Alberta solar industry today and going forward? What does it mean for existing solar related policies and programs? What should be the new solar story that we share?

For this round table discussion, CanSIA is bringing together Alberta industry members along with our policy, regulatory and government relations team. During this member discussion, we want to hear from the industry regarding your main concerns and the priorities you think CanSIA should focus on as we start to interface with this new government. CanSIA will be prepared to share our initial thoughts on how we will defend the solar market in Alberta and advocate for industry priorities concerning policies, regulations, and programs. Furthermore, we will share how we think the public can play a role in our efforts to mobilize support with this new government.

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PRE-CONFERENCE WORKSHOPS – MAY 7, 2019

Workshops are available to Full Conference Registrants & to Trade Show Registrants with Workshop Upgrade Registration. Registration hours are from 9:00am to 6:00pm. All workshops will take place in the Arabian Room. Light refreshments will be served at Workshops. Lunch will not be served at Workshops.

10:00 – 11:30am  WHO WANTS TO BE AN ALBERTA COMMUNITY GENERATOR?  ARABIAN ROOM
Alberta established Community Generation legislation in November 2018. With this framework in place and regulations currently under development, many communities and eligible organizations are curious about the opportunities and challenges of developing a renewable generation project. This dynamic presentation and discussion will provide an overview of: 1) Small Scale Generation Regulation (Alberta Regulation 194/2018), 2) Integrated development model to break down a complex project into accessible increments, 3) Timelines and costs of moving a project from concept to completion, 4) Key steps to get a community development project started on the right foot; and 5) Overview of grid scale solar economics as market-driven green power.

Extensive question and answer opportunities with development professionals and community organizers, including Victor Beda, Senior Project Manager, Aura Power Renewables; Robert J. Henry, Senior Consultant, Peters Energy Solutions; Kristina Groves, Board Member, Alberta Solar Co-Op; and Seth Leon, Manager of Co-operative Services, Alberta Community and Co-operative Association, will ensure attendees leave with a clearer vision of this important segment of the Alberta renewable generation industry.

This session is expected to benefit the following audiences: condo boards, co-operative organizations, industry participants, irrigation districts, indigenous communities or organizations, Municipalities, Not-for-profit corporations, Post-secondary educational institutions, Registered charities, Rural utilities, and School boards.

12:30 – 2:00pm  REMOVING OBSTACLES FOR ENERGY STORAGE IN ONTARIO  ARABIAN ROOM
The Independent Electricity System Operator (IESO) has published a report titled “Removing Obstacles for Storage Resources in Ontario”. Recommendations focus on the removal of regulatory barriers including: i) the IESO Market Rules; ii) the Ontario Energy Board Codes; and iii) other Legislation and Regulations. This pre-conference workshop at Solar Canada 2019 delivered by Daniel Sohm, Senior Engineer, Ontario Independent Electricity System Operator (IESO) will provide attendees with an understanding of: how regulatory modernization has not been keeping up with recent technological changes; and the changes that are needed to encourage and enable energy storage’s benefits in Ontario and in jurisdictions across Canada.

2:30 – 5:00pm  INTRODUCTION TO STANDARDS FOR GRID-INTEGRATION OF DISTRIBUTED ENERGY RESOURCES (DERs)  ARABIAN ROOM
As solar electricity generation rapidly advances in Canada, so too are the innovative power electronics that interface between the grid, photovoltaic modules, inverters, energy storage and distribution-connected electrical loads. This pre-conference workshop at Solar Canada 2019 will provide attendees with an understanding of: the current and future standards for solar electricity and energy storage equipment and grid-integration thereof (including the revised standard for the Interconnection of Distributed Resources C22.3 No.09); and how inverter-based generation is evolving to play an integral role in the smart-grid of the future.

Presenters will include:
• Ed Knaggs, Vice President, HES PV
• Mohsen Sepehr, Project Manager – Electrical Standards, CSA Group
• Gary Thompson, Supervisor, Engineering, Generation, Planning & System Studies, Toronto Hydro
• Brian A McMillan, P. Eng., President and Chief Engineer, McMillan Distribution Engineering (presenting on behalf of NRCan)

The agenda will be as follows:
2:30 – 2:50 – Introduction to PV standards in Canada
2:50 – 3:15 – Introduction to Storage standards in Canada
3:15 – 4:30 – Interconnection of Distributed Resources Standard
4:30 – 5:00 – Q&A
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• 260% greater Time on Site than industry average for B2B directories (Alexa)
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