

**Energy
Opportunities Summit**

Summary Report



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TABLE OF CONTENTS

Background	3
Context.....	3
Summit Agenda and Participants.....	3
What We Heard	4
Opportunities.....	4
Conditions for Success	9
Lessons Learned.....	15
What went well.....	15
What could be improved	15
NEXT Steps	16
APPENDIX A: ATTENDEES	17
APPENDIX B: Participant FEEDBACK.....	19

BACKGROUND

Context

The Jobs Board Secretariat was established to support the Jobs Board and its mandate to foster a jobs and economic growth agenda for New Brunswick. The opportunities-based economic development model is based on the idea that the competition for business investment and for highly ambitious entrepreneurs and talent has never been as high as it is today. We need to identify and align our resources to develop tangible, highly valuable and profitable opportunities that will attract investment from local businesses, communities, ambitious new entrepreneurs and multinational firms.

In order to ensure that we are considering the largest range of potential opportunities for NB's growth, the JBS has organized a series of Opportunities Summits around the province, between late September and April 2016, in partnership with Opportunities NB (ONB) and lead departments.

Summit Objectives

- Identified long list of viable economic opportunities to explore
- Identified conditions for success in identified opportunities
- Participants had a positive experience and felt their contribution mattered
- Participants felt heard

Summit Agenda and Participants

On December 11th from 9:30am-3:00pm at the Marco Polo Terminal in Saint John, NB, over 90 stakeholders gathered to discuss economic opportunities within energy for NB. For a full list of attendees see Appendix A.

9:30am	Welcome and Mingle
9:45am	Remarks Assistant Deputy Minister Bill Breckenridge – Energy and Mines, GNB
10:00	Welcome and Introductions – Susan Holt – NB JOBS Board
10:05am	Energy Future Outlook Canada – Jeff Lyons - Deloitte
10:45am	Brainstorming Opportunities
12:30pm	Lunch
1:00pm	Conditions for Success
2:00pm	Groups report back
2:40pm	Minister Arsenault and Premier Gallant Remarks
3:00pm	Next steps and closing

WHAT WE HEARD

Opportunities

Participants were divided into 15 tables of 6 and were given 30 minutes to discuss the future of Energy in NB.

■ **Imagine it is 2040, what could energy in New Brunswick look like?**

It is evident from the range of responses below that visions for the future of energy among these stakeholders varies widely. Below is a summary of their responses:

Energy in 2040

- 60-100% renewables
- Thriving petro-chemical sector
- Development of shale resources (safely and efficiently)
- Use local resources
- Broader mix of energy options
- Energy security – 100% reliability
- Energy East Pipeline will be operating
- Carbon will be priced
- Much more efficient
- Energy centre of excellence/HUB (R&D and exports)
- State of the art refinery (growth in size and products)
- Using waste product
- Tackled the worst emission offenders with conversion/replacement/elimination
- Transparency in energy use
- Economic growth in shale resources
- Leading edge not bleeding edge (ROI on new tech)
- Increased level of value added to our resources and replacements to export current sources
- Electricity
 - More distributed
 - Carbon free
 - There will be “some” fossil fuel use
 - Nuclear free
 - New nuclear technologies
 - Modular nuclear (smaller plants 200-300 mw)
 - More natural gas in homes
 - Expand NB Hydro, more dams
 - Renewables (solar, geothermal, wind, tidal, biomass) working in concert

- Solar farm storage
- Biomass from waste
- Renewables cost less
- Fuel cell and battery storage will be mainstream
- Tidal power
- Micro hydro similar to BC and California
- Utilities as partner – quarter back the integration
- Natural gas as a transition fuel
- Methane – transition fuel?
- Use biomass in the province to produce electricity (using sustainable forestry management)
- Conduct a biomass inventory
- Capture wasted energy (i.e. Bell Data Centre)
- Implement peak pricing
- Smart technologies
- Net zero homes
- Transportation
 - Electric and driverless cars are mainstream
 - Much more efficient
 - Natural gas vehicles
 - Mass transportation
 - Reduce truck transportation
 - Improved rural and urban transportation systems
 - Fueled by renewables
- Economy
- Culture shift
 - Behavioral shift
 - Energy will be well managed
 - Energy efficiency will be part of our culture
 - Smart homes widespread
 - More citizen engagement in energy policy
 - No one needs to go West for work. “we got it figured out”
 - Relationship with First Nations well established
 - People’s attitudes are changed – social conscience and leadership (takes time, generations)
 - Personalized energy experience “empowered customer”
- Distribution
 - Decentralized
 - Urbanization – community energy

- Community based energy
- National energy grid – decrease emissions and access hydro resources (Quebec/Manitoba/BC)
- East-West (Smart) electricity grid using resources from across the country (solar)
- More regional cooperation
- One government, one utility, 100% generation non-emitting, lowest cost and most reliable grid allowing the region to be the best hub in the world
- Storage – battery, compressed air
- District heating
- More local sources or distribution of production, off grid is the goal!
- Add more to the grid
- Micro grid
- All communities have energy plans
- Government
 - Leaders required to make tough decisions
 - Take the politics out of it, more stability to invest in
 - New policy landscape – development, environment, diversity of sources (changing regulatory oversight)
 - Completely modernized policy and regulatory system
 - Revise building codes and planning acts to support energy efficiency

They were then given 30 minutes to discuss the short term opportunities which would help realize the 2040 opportunities.

What are the opportunities for growth in energy in the next 3 years?

These opportunities are outlined below:

Smart Grid (8 tables mentioned this topic)

- Become smart grid leader in technology
- Capitalize on smart grid initiatives (smart homes and smart apps)
- Smart homes package with the time of use billing, federal funding for renewables and innovation. Create more engaged consumers.
- Open data standards for public analysis and opportunity assessment
- Energy efficiency (smart grid, DSM, time of use shaping behaviors)
- Time of use rates for both consumers and generators – create value for peak saving capabilities, create culture of reducing electricity at peak times, pay more per kwh for hydro/biomass than wind and solar generation
- Smart technology growth

Efficiency Literacy/Education (8 tables mentioned this topic)

- Energy literacy and efficiency
- Create a culture to accept that we can be the energy hub and set the regional culture
- University system become an innovation hub around clean energy solutions by 2019
- Demand side efficiency and management in place (i.e. with enabling infrastructure such as Advanced Metering Infrastructure (AMI))
- Stronger efficiency programs (building retrofits, training, etc.)
- Energy efficient & Renewable energy product development and innovation for NB and exports

Invest/Incentivize Renewables (8 tables mentioned this topic)

- Become a living lab for renewable/smart energy
- Regulatory changes top encourage transition to renewables
- Innovation fund collaboration for clean tech
- Develop different storage technologies (solar battery storage combined with heat power, use procurement to drive innovation, implement existing technologies)
- Incentivize commercially available technology for indigenous energy sources (wood/pellets)
- Invest in micro grid and storage pilot projects to support community energy
- First Nations to be forefront in clean energy

Community Based Energy/ Distributed Generation (5 tables mentioned this topic)

- Community energy planning
- Local community based energy projects
- Facilitating private sector and community generation of electricity (small scale)

Regional Cooperation (5 tables mentioned this topic)

- Regional cooperation to capitalize in regional distributed generation opportunities
- Improve regional transmission with increase in reliability and reducing costs
- Regional utilities working together
- Regional approach to infrastructure
- Energy Plan through collaboration national/inter-provincial

Natural Gas Local Development and Exports (4 tables mentioned this topic)

- LNG exports and reliable source
- Remove moratorium on fracking
- Resolution of gas supply dependency
- Local development of natural gas

Carbon Pricing/Reduction (4 tables mentioned this topic)

- Price on carbon in place
- Carbon trading
- Carbon reduction policy creating a carbon levy/fee to create a fund to invest in carbon reduction initiatives (i.e. converting coal plants to biomass or pellets – creating efficiency incentives and producing alternative transportation fuels)
- Carbon tax to drive innovation

Energy East Pipeline (3 tables mentioned this topic)

- Peripheral advantages to many stakeholders

Tidal Power (2 tables mentioned this topic)

- Tidal power development

Transportation (2 tables mentioned this topic)

- Electric vehicle promotion includes incentives
- Facilitate behavior change – electric vehicles

Conditions for Success

Then tables were asked to choose an opportunity from the ones identified in the previous activity and to identify conditions for success within each of the 5 pillars in the Jobs Board economic policy framework.

Opportunity – Smart Grid	
People	<ul style="list-style-type: none"> ▪ Multidisciplinary field technicians ▪ Strong electrical engineers and IT skills ▪ Big Data analytics skills ▪ Larger talent pool ▪ Mentoring for new companies, new leaders
Ideas	<ul style="list-style-type: none"> ▪ Drive innovation with large global opportunities ▪ Establish relationship between IDB or organizations for export ▪ Adopting right technologies depending on the right fit of the local environment ▪ Focus on decarbonization
Money	<ul style="list-style-type: none"> ▪ Grant money from EDB, IDB, EDC, CCC, BDC, TCS ▪ Tap into federal foreign direct investment funds (4.15B, C2F – 250m???) – export technology solution ▪ Consumer incentives ▪ Unlocking community capital aka smart cities, efficiency measures, free capital, provincial pension funds
Infrastructure	<ul style="list-style-type: none"> ▪ Start-up collaboration ▪ Companies involved design, install and educate on the consumer side ▪ Consumer awareness
Nimble Government	<ul style="list-style-type: none"> ▪ Regulatory flexibility ▪ Legislation promoting green energy and smart consumption ▪ Build sustainable models to build businesses ▪ Strong customer incentives for demand side management and green energy

Opportunity – Energy Literacy/Education	
People	<ul style="list-style-type: none"> ▪ Follow societal trends – speak in users language (greater good, health, environment) ▪ Help people to understand what things mean, then develop the policies ▪ Broad stakeholder conversation ▪ Educate kids (i.e. The Gaia Project) ▪ NB Energy Talks ▪ Building and energy managers ▪ All New Brunswickers ▪ Contractors ▪ Suppliers ▪ Support existing groups (i.e. The Gaia Project) ▪ Educators ▪ Industry ▪ Building industry – construction ▪ Utilities ▪ Energy contractors/trades

	<ul style="list-style-type: none"> ▪ Community Colleges
Ideas	<ul style="list-style-type: none"> ▪ Broader education ▪ Who pays? ▪ Use carbon tax revenues as innovation fund to pay for efficiency, literacy and education ▪ System benefit charge to fund efficiency programs ▪ Lead by example (all stakeholders) ▪ More funding for The Gaia Project and other existing organizations ▪ Energy Fundamentals for Leaders ▪ “there is an app for that” ▪ Education in school start young ▪ In home energy display ▪ Fuel switching
Money	<ul style="list-style-type: none"> ▪ An awareness of cost effective efficiency ▪ Jointly funded energy education programs (ex. Smart Habits) ▪ Lower cost of capital. Energy efficiency initiatives (P/P/P) ▪ Efficiency fee ▪ Financial incentives – rebates, low income ▪ Time of use rates ▪ Innovation fund
Infrastructure	<ul style="list-style-type: none"> ▪ Online shared ownership (NGO quarterbacking this...) ▪ Formalized Smart Habits programs ▪ Advanced metering infrastructure ▪ Electric vehicle charging station ▪ Storage
Nimble Government	<ul style="list-style-type: none"> ▪ Access to funding – made easier ▪ Equitable proportion, finding the right balance ▪ Collectively making energy efficiency s priority and lead by example ▪ Policy change utility board ▪ Efficiency policy ▪ Building codes ▪ Look at all fuels not just electricity

Opportunity – Incentivizing Renewables	
People	<ul style="list-style-type: none"> ▪ Have businesses on in-house expertise on sustainability, etc. ▪ Skills/university/training/coop programs ▪ Bring in experts to train us on success stories ▪ Public safety does not have expertise ▪ Standardize certification (i.e. boiler act)
Ideas	<ul style="list-style-type: none"> ▪ Life cycling costing (showing it is more affordable) ▪ Innovation research should be collaborative within the Maritimes (i.e. battery storage) ▪ Research chairs (I.e. clean tech) ▪ Go abroad for ideas ▪ Co-operatives
Money	<ul style="list-style-type: none"> ▪ Equity share by province ▪ Low interest loans

	<ul style="list-style-type: none"> ▪ % of NB pension funds ▪ Development strategy with money attached ▪ Feed in tariffs other equalization payment to ensure “rate parity”
Infrastructure	<ul style="list-style-type: none"> ▪ Demonstration projects ▪ Local and community focus ▪ Manufacturing capacity ▪ Government lending by example and buying local ▪ IRB like programs ▪ Demonstrate integration of technologies
Nimble Government	<ul style="list-style-type: none"> ▪ GNB needs to experience new ideas from other jurisdictions ▪ Carbon fee to invest in renewable ▪ Flexible ▪ Renewable energy plan that stimulates business

Opportunity – Community Generation/Micro Grids/Distributed Generation	
People	<ul style="list-style-type: none"> ▪ Local leadership ▪ Energy literate population ▪ Business acumen and support ▪ Local and sectoral partnerships ▪ Community support ▪ NBCC Green Tech programs ▪ Training on First Nations ▪ Regional collaboration for storage (Tesla) and power (UNB) ▪ Partnership with utility ▪ Energy efficiency champion (independent of elections) ▪ Could be regional to capture small municipalities
Ideas	<ul style="list-style-type: none"> ▪ Local area network for natural gas to stranded areas ▪ Leveraging others best practices and knowledge base ▪ External expertise access ▪ Shared vision ▪ Biomass district heating ▪ Appropriate storage ▪ Champion – community based energy planning ▪ Cost/benefit analysis ▪ Social license for technology ▪ Smart grid: Community resiliency planning (hospitals) – battery storage and CHP ▪ Energy literacy and education ▪ open data – evidence based decision making rather than ideology
Money	<ul style="list-style-type: none"> ▪ Tax incentives ▪ Reasonable ROI ▪ Initial capital ▪ Known business model ▪ Feed in tariff ▪ Rate compensation (\$/kwh) for dispatchable distributed energy ▪ Federal funding for municipalities

	<ul style="list-style-type: none"> ▪ Business models: financing, renting, leasing of technology
Infrastructure	<ul style="list-style-type: none"> ▪ Grid/distribution system capacity ▪ Diversified energy source ▪ Interconnection ▪ Government buildings being anchor loads for district heating (CHP) ▪ New federal \$: cost share distributed generation with federal money ▪ Landfills: capture methane and biomass ▪ Local resources (biomass)
Nimble Government	<ul style="list-style-type: none"> ▪ Regulations to support ▪ Transparency large and small generation ▪ Lean process for certification ▪ Local ownership of renewable projects keep the money in the province ▪ Government leadership green tech ▪ Life cycle costing on government buildings ▪ Supply chain opportunities for local content and jobs – government procurement ▪ Planning – smart co-location of buildings (heat generation and use) ▪ Interconnected regulations

Opportunity – Regional Cooperation	
<i>*Maritimes – but cooperation is required within NB as well</i>	
People	<ul style="list-style-type: none"> ▪ Portability of skills – standardization of regulations ▪ Alignment of education – similar programs deliver equal skill sets across the region ▪ Need government cooperation
Ideas	<ul style="list-style-type: none"> ▪ Regional marketing strategy ▪ Pick what we are individually good at and develop a world class expertise – pick one thing per region and go for it, focus on excellence ▪ Regional energy plan
Money	<ul style="list-style-type: none"> ▪ Tax incentives are critical for economic development and attraction - need regional plan for incentives to drive regional growth
Infrastructure	<ul style="list-style-type: none"> ▪ Utilities work in collaboration ▪ Regional economic development strategy to leverage regional infrastructure
Nimble Government	<ul style="list-style-type: none"> ▪ Standardization of regulations ▪ Collaborate to develop plans for mutual benefit in opportunities ▪ Need political will to execute

Opportunity – Natural Gas Development	
People	<ul style="list-style-type: none"> ▪ Benefits to NBers ▪ Comfort level with oversight/understanding ▪ Respect for communities concerns ▪ Work with First Nations ▪ Leveraging skilled/experienced NBers
Ideas	<ul style="list-style-type: none"> ▪ Test cases – start small

	<ul style="list-style-type: none"> ▪ Post commission refresh/restart dialogue on way forward ▪ Natural gas a transition fuel from coal to support new industries
Money	<ul style="list-style-type: none"> ▪ Support competition and growth of NB businesses ▪ Heritage system for shared benefit ▪ Return on investment
Infrastructure	<ul style="list-style-type: none"> ▪ Efficient distribution system ▪ Leverage existing infrastructure ▪ Baseline studies and monitoring stations
Nimble Government	<ul style="list-style-type: none"> ▪ High standards, regulatory oversight ▪ Balanced royalty framework

Opportunity – Carbon Pricing	
People	<ul style="list-style-type: none"> ▪ Sales people ▪ Educators ▪ Governance ▪ Bigger CC secretariat ▪ SNB
Ideas	<ul style="list-style-type: none"> ▪ Analysis of global landscape ▪ Competitive lend
Money	<ul style="list-style-type: none"> ▪ Tax ▪ Cap ▪ Trade ▪ Distribute
Infrastructure	<ul style="list-style-type: none"> ▪ Building codes ▪ Smart grid ▪ Accounting system ▪ EMIS ▪ Administrate and distribute
Nimble Government	<ul style="list-style-type: none"> ▪ Transparent re-distribution – rules re communication and info sharing

Opportunity – Energy East Oil Pipeline	
People	<ul style="list-style-type: none"> ▪ Social acceptance ▪ Trust in government and industry ▪ Skilled labour ▪ First Nations participation/input ▪ Fishers/farmers and other stakeholders impacted
Ideas	<ul style="list-style-type: none"> ▪ Environmental assessment public access ▪ Ongoing monitoring – environmental and safety ▪ Monitor marine habitat ▪ Extended labour contracts and training ▪ Comprehensive emergency plan
Money	<ul style="list-style-type: none"> ▪ Capital markets funding

	<ul style="list-style-type: none"> ▪ Government contractual stability ▪ Weighted procurement to local NB ▪ Ability to finance response/recovery
Infrastructure	<ul style="list-style-type: none"> ▪ Marine safety emergency response (environmental spill recovery) ▪ Reliable electric supply ▪ Social programs to deal with impact
Nimble Government	<ul style="list-style-type: none"> ▪ Local business participation ▪ NEB and Provincial government alignment of regulations and processes ▪ Transition from project to project

Opportunity – Alternative Fuels for Transportation (biofuels and ethanol) produced locally	
People	<ul style="list-style-type: none"> ▪ Atlantic Council Bioenergy Coop (ACBC) – industry association ▪ Farmers, forestry workers ▪ Petroleum producers refinery
Ideas	<ul style="list-style-type: none"> ▪ Define benefits and costs ▪ CO2 lifecycle costs ▪ Research alternative crops/feedstock for production ▪ Testing for additional blends beyond 2-5%
Money	<ul style="list-style-type: none"> ▪ Agriculture incentives ▪ Government funded production incentives ▪ Capital assistance
Infrastructure	<ul style="list-style-type: none"> ▪ Existing ▪ Potentially new infrastructure (roads) for new farms and forestry
Nimble Government	<ul style="list-style-type: none"> ▪ Federal targets exist – 5% ethanol & 2% biofuel ▪ Local production policy – agricultural crops, forestry operations ▪ Tying support to net environmental benefits

Opportunity – Tidal Power	
People	<ul style="list-style-type: none"> ▪ Skilled workers ▪ Composite materials expertise ▪ Engineers ▪ Environmental
Ideas	<ul style="list-style-type: none"> ▪ Open flow turbine ▪ Access to focused research centres ▪ Test facilities for proof of concept
Money	<ul style="list-style-type: none"> ▪ Access to investment ▪ Reasonable tariff ▪ How much more will NB Power pay vs. other non-renewables
Infrastructure	<ul style="list-style-type: none"> ▪ Connection to the grid ▪ Access to port facility for maintenance
Nimble Government	<ul style="list-style-type: none"> ▪ Leases for sites – Bay of Fundy, rivers ▪ Policies to promote tidal ▪ Needs to be part of the NB Power strategy

LESSONS LEARNED

This summit was the twelfth in a series of sector specific Opportunity Summits throughout the province therefore much was learned to improve for the future summits:

What went well

- Great mix of people in the room
- Great buzz of conversation
- Government participation at tables
- Lots of notes taken at each table

What could be improved

- More diversity at tables for first question
- Electricity focused discussion
- Conflicting interests at tables didn't allow for certain ideas to move forward
- Graphs in Deloitte presentation were hard to read

NEXT STEPS

Summit Survey

Following the summit a survey was sent to the participants to collect additional input on the ideas discussed and the event itself. This feedback helps us to assess which discussions resonate beyond the summit, as well as to continue to improve future summits.

Summit-Specific Report

Following each summit a report of the ideas generated (this document) and participant feedback (Appendix B) is shared with all participants following the summit.

All-Summits Report

After the full series of summits have been completed a final report will be prepared and shared with all summit participants. This is meant to provide visibility of the ideas generated from other summits and to highlight common themes related to the opportunities.

Early Opportunities

The Jobs Board Secretariat plans to identify and advance initial opportunities coming from the summits in partnership with Opportunities NB and lead departments, and to test the opportunities-model of economic development using the 5-policy pillar structure on these early opportunities. We will also identify opportunities that would benefit from further study and those that government is not well-positioned to lead, and share this assessment with the community of participants and interested New Brunswickers.

Implementing Policy Conditions for Growth

Finally, with your help, we will identify the best growth opportunities for New Brunswick. The Jobs Board Secretariat will lead the formation of cross-departmental teams, the development opportunity plans and measures, and assist in the implementation of the necessary policies to create the conditions growth. GNB will then track the progress and outcomes of these efforts and report those findings.

Future Summits

Consideration is being given to hosting follow-up summits in 2016 and early 2017 to explore whether this approach is demonstrating early results, discuss how it could be improved, and what has changed with the opportunities for NB's economic growth.

APPENDIX A: ATTENDEES

Name/Nom	Organization	Name/Nom	Organization
Lynn Arsenault	NB Power	Marcel LeBrun	Epic Energy Solutions Inc
Mark-Anthony Ashfield	Deloitte	Jonathan Levesque	Groupe Savoie
Stuart Baker	True Growth Network	Graham Little	Irving Oil
Chris Boudreau	LTC Energy	Michel Losier	NB Power
John Bourque	Bourque Industrial Ltd.	Théo Losier	Biomass Solution Biomasse
Pedro Boyra	Canaport LNG	Ken Magnus	Atlantic Council for Bioenergy Co-operative Ltd
Jonathan Calabrese	Deloitte	Chrystiane Mallaley	National
Steve Carson	Enterprise Saint John	Leslie Malone	Acadia Center
Chuck Cartmill	Cartmill Group of Companies	Charles Martin	Ville d'Edmundston
Joe Cashion	North Water Capital	Colleen Mitchell	Atlantica Centre for Energy
Tony Chislett	Hatch	Carol Montreuil	Canadian Petroleum Products Institute
Archibald Collins	Emera New Brunswick	Mark Mosher	J.D. Irving Limited
Lois Corbett	Conservation Council of NB	Pierre Mullin	Siemens Smart Grid Application
Keith Cronkhite	NB Power	Melvin Nash	WaterMoc One Power Corp
Tim Curry	UNB Saint John	Eddie Oldfield	QUEST
Dan Dionne	Perth Andover	Christian Richard	Emera New Brunswick
Jason Doiron	Forté Communications	Joel Richardson	Canadian Manufacturers & Exporters
David Duplisea	The Chamber	Ray Ritcey	The Maritimes Energy Association
Craig Estabrooks	Port Saint John	Ray Robinson	Saint John Energy
Hélène Eusanio	LTC Energy	Georges Roy	Ville d'Edmundston
Ken Flemming	Irving Oil	Claire Ryan	CAA
Sean Flemming	Solar Global Solutions	Tim Ryan	Fundy Engineering
Rudi Fowler	Epic Energy Solutions Inc	Meaghan Seagrave	BioNB
Keelen Gagnon	SimpTek Technologies	Bob Scott	NB Power
Yves Gagnon	Université de Moncton	Larry Shaw	Ignite Fredericton
George Garrison	Siemens	Margo Sheppard	Council of Canadians, NB Environmental Network
Peter Gaulton	Port Saint John	Kevin Shiell	NBCC
Dave Grebenc	Innovatia	Scott Shreenan	UNB - TME
Amanada Hachey	Forté Communications	Sheri Somerville	Canadian Association of Petroleum Producers
Dion Hanrahan	J.D. Irving Limited	Michael Taylor	UNB, Office of Research Services
Asif Hasan	SimpTek Technologies	Emma Theriault	Government of Canada
Mike Haycox	Ernest & Young LLP	Jimmy Therrien	The Gaia Project
Hugh Hicks	ACOA / APECA	David Thomas	Enterprise Saint John
Garth Hood	Thoughtful Dwellings	Gaetan Thomas	NB Power
Neil Jacobsen	City of Saint John	Kirby Tremblay	Green Energy
Wendy Keats	Co-operative Enterprise Council of NB	George Tsafalas	First Sahara Energy
Richard Knappe	Epic Energy Solutions Inc	Gilles Volpé	Enbridge Gas New Brunswick
Patrick Lacroix	TransCanada	James Walsh	Irving Oil
Susan Layton	Emera New Brunswick	Bradley Wasson	NB Power
Bertin LeBlanc	Halcyon	Karen White	National

GNB participants	
Name/Nom	Organization
Premier Brian Gallant	GNB
Minister Donald Arseneault	Minister, Energy and Mines
Susan Atkinson	GNB - Environment and Local Government
Don Barnett	GNB - Energy and Mines
Nadine Boudreau	GNB - Energy and Mines
Bill Breckenridge	GNB - Energy and Mines
Tyler Campbell	GNB - Energy and Mines
Keith Endresen	GNB - Energy and Mines
Jean Finn	GNB - Energy and Mines
Susan Holt	GNB - Jobs Board Secretariat
Eddie Kinley	Opportunities NB
Hemant Kumar	GNB - Jobs Board Secretariat
Keith Melvin	Opportunities NB
Sacha Patino	GNB - Energy and Mines
Heather Quinn	GNB - Energy and Mines
Jay Reid	Opportunities NB
Lesley Rogers	Environment and Local Government
Lisa Roy	GNB - Energy and Mines
David Sollows	GNB - Energy and Mines
Lori-Jean Wallace	GNB - Energy and Mines

APPENDIX B: PARTICIPANT FEEDBACK

APPENDIX B: Participant FEEDBACK

Surveys sent – 73

Responses received – (56%)

Our objectives for the Energy Opportunities Summit were:

Information Gathering

- Identify a long list of viable economic opportunities to explore
- Identify conditions for success in identified opportunities

Participant Experience

- Participants had a positive experience and their contribution mattered
- Participants felt heard

Nos objectifs pour le sommet des possibilités énergétiques ont été :

Collection des idées

- Identifier une liste des opportunités économiques viables pour explorer
- Identifier les conditions de réussite pour les opportunités identifiées

Expérience des participants

- Participants ont eu une expérience positive
- Les participants se sentent entendus

Answers are provided in the language they were given. Les réponses sont fournies dans la langue qu'ils ont été reçu.

Q1. Which opportunity discussed most interested you?/ Quelle opportunité discuter vous intéresse le plus ?

Theme – Renewables & Green Energy

Renewable Energy (general) x5

Solar x 3

Tidal x2

Biomass x 2

“Renewables (not wind and solar as I don't believe they are viable here) opportunities to manufacture renewable energy equipment etc.”

“production of biofuels in NB re transportation fuel”

“Opportunity to develop new green sources of energy and close earlier than expected polluting stations, especially after the Paris Conference. Tidal power is the new substantial opportunity right in our backyard.”

Theme –Projects & Initiatives

Energy East pipeline x4

Smart Grid x3

“Smart grid development, and the possibility of promoting NB as a test-bed for new energy-related technologies”

Theme – Community & Collaboration

Génération d'énergie dans les communautés / Community Energy x 3

Regional Collaboration x2

“Regional approach to leveraging our natural assets”

Theme – Natural Gas

Natural Gas Exploration and Development x 4

Theme – Other

“Living Lab approaches, storage systems, local/community generation”

“Support for Energy Trading and Marketing Business”

“carbon emission reductions”

“Net Zero Energy systems”

“Short-term / immediate energy-related opportunities.”

Q2. How do you feel that your contributions were heard?/ Comment pensez-vous que vos contributions ont été entendues ?

Not at all / Pas du tout – 0%

A bit / Un peu – 17%

A lot / beaucoup –60%

Completely / Complètement – 24%

Q3. L'élément le plus important que j'ai retenu suivant le sommet est : / My biggest take-away from the Summit was:

Theme –Climate & Green Energy

- “l'augmentation de la compréhension de l'importance de l'environnement et des opportunités d'utilisation d'énergie verte dans la province”
- “NB is way backward in the energy sector and the Green Economy”
- “I was surprised at the amount of interest in renewables.”
- “Global / National / Regional interests in renewables and Net-Zero are all aligned. There is a massive opportunity for job & revenue generation from this sector.”
- “We need to decide if we are going to seriously address climate change in NB If we are fracking and pipelines are off the table.”
- “L'attitude positives des participants aux changements climatique”
- “the greatest long-term energy opportunities are those that harness innovation, collaboration and the growing emphasis on clean technology “
- “we need to help build a base of knowledge around carbon pricing as we go forward.”
- “Job creation opportunities from Energy Efficiency”
- “That the province is still pursuing fossil fuels in a much greater way than they are renewables”

Theme – Opportunities and Development

- “There was significantly more support for shale gas development than I expected given the ongoing moratorium”
- “Many opportunities - Community Energy Planning can help prioritize significant local energy opportunities”
- “It is difficult to get energy projects done in NB”
- “Opportunities exist, but the political will to make them happen is essential.”
- “The breath of energy sources available and potentially available in NB.”
- “Lots of good ideas already. We need implementation funding”

Theme – Networking & Collaboration

- “Collaboration opportunity with startup”
- “We need to build concensus based on diverse perspectives.”
- “We have to align our objectives and establish a climate for success.”
- “Better coordination”
- “I believe there were several common ground topics/themes that would allow stakeholders to get behind.”
- “Input from individuals with opposing views”

Theme – Government

- “The Province of NB is listening and learning”
- “The willingness of the government to listen and cooperate with the private sector.”
- “Le gouvernement est ouvert à travailler avec les gens pour évaluer les possibilité dans le secteur de l'énergie. Aussi, de bonnes ressources existe déjà dans la province.”
- “Participants seem to be more forward thinking (renewables, innovation) than the government (Energy East, LNG, shale)”

Theme – Other

- “There is a lot that needs to be done”
- “Il y a beaucoup de différentes possibilités et cela rend le choix de projets potentiels très complexe. Plusieurs idées semblent bonnes. Peut-être qu'un deuxième sommet pour discuter de certains sujets plus en profondeur pourrait être une bonne idée.”
- “The number of Representatives from the Gas and Oil industry industry”
- “Everyone recognized a change has to happen in the way we use energy.”
- “We need to focus on core priority areas”
- “urgency as lead time for solutions is long....need to start now”
- “A lot is at stake”
- “Without realiable price competitive energy this province is not going to move forward”
- “There is still a long way to go to develop a strategy”
- “Consensus on possibilities in the short and medium terms.”
- “As a province we need to align our needs Vs. wants. That is; we may want more renewable, clean energy sources, but we can't also be against hydro because it has an impact. Every energy option will have an impact - solar and wind included.”
- “How important Energy is going to be going forward and in particular its importance with respect to the economy.”

- “I believe there were several common ground topics/themes that would allow stakeholders to get behind.”

Q4. S'il vous plaît évaluer les éléments suivants du sommet / Please rate the following elements of the summit:

	unsatisfactory / insatisfaisante	neutral / neutre	good / bon	great / excellente
Venue/ Lieu	0%	12%	38%	50%
Timing/Calendrier	0%	10%	38%	52%
Refreshments/Nourriture	0%	12%	48%	40%
Faciliator/Animateurs	2%	2%	57%	38%
Agenda/Ordre du jour	7%	10%	57%	26%

Comments / commentaires

“The summit should have been called the "Oil and Gas Summit" rather than the "Energy Summit". It is pathetic that the keynote and only speaker was a person from Alberta who raised the denial of climate change in his presentation. I am writing this email from OECD (Paris), attending meetings on the Green Economy; that is the pathway for economic growth in the coming years. ”

“Je pense qu'une journée supplémentaire nous aurais permis de discuter d'avantage les idées. Aussi le vendredi n'était pas la meilleure journée pour ceux qui ont un trajet plus long a faire pour le retour a la maison... ”

“Location plus central pour les gens de l'exterieure et ou une location cible en fonction des objectifs.

“Le son dans cet endroit n'était très bon. Nous ne pouvions pas toujours bien comprendre ce qui était dit.”

“Excellent sommet! J'ai été impressionné par la qualité/connaissance des personnes qui se sont déplacé pour le sommet”

“A little more networking time could be valuable. Good idea to have a list of participants. Could add an email address? ”

“This was a fantastic event, very pleased to attend.”

“It would have been nice to see more speakers talk about Climate Change and the urgent need of mitigation steps as well as how we are going to reduce pollution here in NB.”

“A great day and some solid conversation about an issue that the province has really struggled with. Now is the time to take a position and stick with it.”

“With specialists from different energy sectors agreeing on many fronts, I left the Workshop very enthusiastic about the potential here in NB.”

“While the structure of changing tables at each session was great for networking and gathering different perspectives, it also felt like it limited to some extent the depth of analysis that was possible due to lack of continuity in the conversation.”

“Well organized and executed. Accomplished more than I thought we would given the time constraints. Although the format was similar, the flow was much better than the IT summit.”

“The facilitators are weak. The approach seems to produce a large amount of ideas with little focus. The reports produced are "awful" (e.g. agriculture) hope it improves. Its just a mish-mash of the ideas with no grouping themes etc. difficult to draw conclusions.”

“Valuable session and great opportunity for input. Appreciated the diverse voices in the room and hearing different perspectives.”

“The agenda was good. I think there were too many folks (groups) to go through all the table presentations at the end. Also, the speaker from Deloitte wasn't great - he focused his talk on 'Alberta and their fall from grace' - we are not Alberta.”

“If the province is really looking for actual projects that could boost our economy this format was poor as it was far too general and by pre-identifying the "opportunities" simply led people to tell you what you wanted. An effective process would not have had speakers or 30 minute discussions on a topic but would have provided a forum for real input on specific opportunities.”

“It took a few minutes for the discussion to start flowing on the first brainstorming session. Perhaps a few "lighter" questions with shorter time frames to discuss would have jump started the initial morning conversation until people felt comfortable sharing ideas.”

“In general I felt that the event had real merit however i think that there needs to be real focus on the now. that being said it has to work with the future.”

“The echo in the room made it difficult to hear at times (room was too big).”

“I am appalled that there was no speaker on climate change and renewables. The chosen speaker was totally unacceptable. Any speaker should be told that any references to climate doubt are unacceptable as there is mountains of proof of climate change. We need speakers the inspire to the future and the possibilities not status quo based "realities." The reality is we are going to burn the planet if we don't change our energy systems now.”

“I had to leave at the lunch break for a holiday commitment”

“Well prepared and managed”

“Venue worked well. Energy Dept staff did an excellent job. Food was also excellent”

Q5. The best part of the Summit was / La meilleure partie du sommet a été :

Theme – Networking, Collaboration and Sharing of Ideas

- Group Discussions x16
- Networking x6
- “Discussion from various parties representing diverse backgrounds”
- “Meeting new folks with similar ideas.”
- “opportunity to interact with other business leaders on challenging long term issues”
- “Hearing the collective thoughts of all the groups at the end of the brainstorming sessions.”
- “Meeting some solar energy folks”
- “Having a diversified group to brain storm the future”
- “Diversity of backgrounds and perspectives in the room - respectful dialogue.”
- “being exposed to the wide variety of perspectives and opportunities in the energy sector, and gaining a better understanding of the various groups that have an interest in - and potential to collaboratively shape - the sector. “
- “Conversations around growth strategies”
- “Meeting like-minded people who care about our environment more than just profit”
- “Opportunity to exchange with other participants and get a sense for the diversity of the energy options and opportunities for NB”
- “Interaction with other participants”

Theme - Presentation

- “Identify sources of green energy. I also did appreciate our first speaker Mr. Lyons”
- “J'ai bien apprécié la mise en contexte mondial de Jeff Lyons. J'ai aussi apprécié l'échange que nous avons eu avec les gens de d'autres secteurs d'activités.”

Theme - Other

- Food x2
- Structure
- “looking to identify short term and long term energy ideas”
- “Conversations around growth strategies”

Q6. The least valuable part of the Summit was / La partie la moins utile du sommet a été :

Theme – Format

- “Identifying opportunities exercise”
- “The format (world cafes) and agenda”
- “The term energy was narrow focused based on the type of energy talked about most.”
- “All of the speakers including Premier & Energy Minister. Pipelines & fracking are unacceptable give current climate crisis.”

Theme – None/ Positive Comments

- None or N/A x17
- “Group interaction was great”
- “Lunch...but it was good too, you are making me choose one thing.”
-

Theme – Presentation

- Presentation x 6
- “The initial “state of the market” at the beginning was too Calgary centric; an Atlantic, eastern seaboard market is more meaningful to our discussion.”
- “Les présentations n'étaient pas lisibles sur les écrans. Voir à rendre les présentations disponibles sur Ipad ou ordinateurs”
- “Alberta focused intro”

Theme - Other

- “Late arrival of the PM and the Minister. My thoughts are that the information would be more ingrained in their memory to help them make faster and more educated decisions based on the topics discussed.”
- “Could have been a bit more background on situation with NB Power”
- “The thought that it may be all talk and no action.”
- “An economic growth in the energy sector (long term sector) over the next three years (short term horizon).”
- “Industry briefing (too focused on Alberta + Oil&Gas)”

Q7. Où aimeriez-vous voir le gouvernement concentrer ses efforts pour appuyer la croissance du secteur de l'énergie ??/ Where would you like to see government focus their efforts to help grow the energy economy in NB?

Theme – Major Projects and Developments

- Energy East x 3
- Shale gas x 3
- “In major energy infrastructure projects, because of the economies of scales and the financial benefits for the coffers of the province,”
- “Big capital projects are great for the NB econ (we support them) however many other areas employment growth not linked to big capital projects in NB.”

- “All energy options - traditional (pipeline, LNG shale gas) and renewables. We need diversity not focus”
- “In major energy infrastructure projects, because of the economies of scales and the financial benefits for the coffers of the province.”

Theme – Renewables and Green Energy

- Renewables x 5
- “Production of large-scale, reliable, affordable, and carbon-free energy”
- “Moving NB to become a renewable energy leader.”
- “focus on the long term renewable energy strategies and strategies to reduce consumption”
- “Policy that promotes cost-effective green energy”
- “Renewable energy and green economy “
- “Stimulating renewable energy projects - and related manufacturing in NB”
- “Increase focus on renewables, or at least on natural gas as a transition fuel to renewables.”
- “En utilisant nos propre sources d'energie naturel en primeur.”
- “Natural gas as a bridge source to renewables, better incentives for renewables.”
- “significant ramp up in energy efficiency across all economic sectors.”
- “Utiliser nos sources d'énergie provenant du NB, diminuer notre dépendance des énergies fossiles....”
- “L'énergie la plus propre et la moins dispendieuses est celle que nous n'utilisons pas. Donc, l'efficacité énergétique sur plusieurs plan, pas seulement dans le secteur qui implique ÉNB. L'exploitation sécuritaire du gaz de schiste.”

Theme – Other Project Development

- “District heating, smart grid, tidal, solar”
- “Economic developmen oportunities around smart grid”
- “create policy and programming to encourage new energy development”
- “Opportunities for businesses - pilot programs for renewables and SMEs, local procurement initiatives, investment in energy R&D, lifecycle cost procurement practices, government leadership in the adoption of new renewable energy technology (Net-Zero for all new provincial and municipapl build on support for development and adoption of innovation-driven clean technologies, including smart gridings)”

Theme Government

- “Government and utility procurement in the energy field”
- “improve internal communication inside GNB”

Theme – Other

- “Energy independency. It is imperative that NB explore its local fuel supply if the province is to remain competitive on the national scene in the future”
- “We need a short-term action plan with clear goals and deliverables (similar to the previous Energy Blueprint). A positive decision re natural gas exploration and development.”
- “Help educating the public and business on their energy use.”
- “Encourage startups to participate directly”
- “Regional approach to infrastructure and energy development “
- “Studies do not grow economies; start executing a growth plan based on attracting capital “before there is no one left who cares.

- “NB needs to be very active on all forms of the energy economy especially taking a leadership role on what is not popular. It is easy to get behind certain projects and initiatives. True leadership also gets behind what is not popular especially if it has value for the province.”
- “Regional Collaboration to reduce duplication and seize opportunities (especially renewable energy to New England)”
- “Leveraging the Saint John energy hub. Ensuring access to cost competitive natural gas. Using GNB contracts to lead the way on implementing energy efficiency projects that are growth drivers.”
- “If there is to be an energy economy in NB, we need to understand what that means and be willing to say yes to some amount of growth and development. If, as a province we are not willing to do that, then a conversation about an energy economy is without direction. For example; at one point during the day the room talked about trying shale exploration - but NB did that more than a decade ago. So, if we want to move forward, we need to look at what we've done in the past and what has worked, and where we want to go.”

Q8. What is something you can do to support the growth of the energy sector in NB?/ Que pouvez-vous faire pour aider à la croissance du secteur à Nouveau-Brunswick?

Theme – Collaboration

- “work with industry and government to identify P&P that is effective”
- “serve as a liaison between provincial and federal governments with regard to provincial priorities and federal support mechanisms; raise awareness at the federal level of provincial energy-related innovation and economic development initiatives; support collaboration through information sharing and connecting stakeholders with intersecting interests”
- “Newly elected to Maritimes Energy Board - blogging and connecting people”
- “En offrant nos idées, expertise et savoir faire auprès des intervenants.”

Theme – Growth and Investment

- “Started a NB company for manufacturing a product in this field”
- “Startups like us are bringing innovation at a faster rate than any other large organizations. Therefore, I would directly participate by contributing my solution to enhance the growth of energy sector in NB”
- “entrepreneur support and start up activities”
- “Start an energy company”
- “help in the development of small scale energy projects such as biomass gasification, household solar hot water or others”
- “Continue efforts to assist in developing tidal opportunities”
- “We will continue to grow our renewable energy business in N.B.”
- “Delivery world class Smart Grid technology”
- “Support the development of alternative energy”
- “Keep driving/working hard on key files”
- “Continue to push for diversification of energy sources”
- “Provide technology to gasify standard customers, like the northern part of the province.”
- “Bring job capacity and support to the province”
- “Explore any LNG opportunity that may be feasible in the future (bunkering, transportation, LNG for remote facilities, export terminal, etc.)”

- “Help SMEs develop energy-related technologies for use at home and for export”
- “Help lay out a roadmap to launch a renewable energy industry in NB”
- “Continuer à offrir nos services afin d'augmenter l'utilisation de biomasse dans la province”
- “Continuer à évaluer ce que nous pouvons faire pour augmenter la production d'énergie à Edmundston”

Theme – Education & Advocacy

- “Try to help educate citizens and continue to develop our companies skillets.”
- “Educate others, educate myself on the different options and what they mean to the province over a long-term period.”
- “Education on the growth in the renewable energy industry globally - this is one of the largest economic opportunities in the energy sector in over 20 years. NB has an excellent opportunity to capitalize on this based on the smart-grid initiatives by NB Power and Siemens”
- “Promote the use of open flow energy production”
- “Advocate for the industry within work circles.”
- “QUEST is interested to help advance Community Energy Planning in N.B., improve energy literacy, and identify/help move forward energy plans and projects”
- “Community advocate for responsible energy development - we need to focus on energy education and literacy.”
- “Promote the growth of the NB Energy sector with everyone I speak with (which I do already).”
- “Continue to support the sector in all its forms and push Gov't to do the same.”
- “I am already spreading the word about the the opportunities in renewable energy and efficiency. I can also help develop products for energy efficient housing.”
- “Support growth through social media & continue to support energy development”
- “Participer à l'analyse de cas d'affaire de certains projets. Supporter le gouvernement dans les projets qui ont bien été analysés et qui sont dans le meilleur intérêt des citoyens de NB pour le développement de notre économie.”

Theme – Other

- “get the policy framework right”
- “As a senior leader with Emera, we are active in this space daily”
- “NB Power is certainly positioned to be of great assistance”
- “Our company CSS and the CCNB Research centre are doing all possible to develop and support renewable energy and chemicla projects in the province of NB. The lack of policy compared to all other provinces in Canada makes developing these projects in NB difficult.”
- “Incorporate appropriate ideas from the summit into the Climate Change Action Plan”

Q9. Please share any other feedback you have on the Summit / Veuillez nous faire part d'autres commentaires que vous avez sur le sommet.

Theme – Positive Comments

- Well Done x 9
- “Overall I enjoyed the Summit and appreciated the opportunity to participate”
- “Excellent participation / turn-out. Good context setting presentation (Deloitte). Good facilitation. Excellent roundtables for generating ideas, discussing what is needed for their implementation.”
- “Well organized and on concrete contents”

- “look forward to results and actions from the summit”
- “All in all, I was honoured to be a part of the discussions and think that the summits are a great initiative, although it would be nice to see the general public have an opportunity to participate in the submission of ideas given the limited size of the province's business community”
- “I thought it was good - left feeling like that we only scratched the surface and that the sector is complex. diverse with alot of oppotunities but that the province and department has a plan that isnt really in sync with what the participants contributed and that the government is going to continue with the current plan regarless of the outcomes of the summit.”
- “Thought it was good with such a diverse group”
- “Bon sommet en général, devrait avoir un suivi dans les prochains 6 mois”
- “Great to hear the perspective from Alberta Oil.”

Theme – Constructive Feedback

- “Perhaps a reception late the evening before for those that came in from away.”
- “Be more culturally sensitive to the Aboriginal way of life and customs”
- “too many participants were there to promote their projects or to lobby for a groupe instead of offering unbiased opinions”
- “Don't mean to sound negative but feel for the most part this Summit was a farce and designed to simply give government the answers they wanted to hear”
- “Good summit overall, but many of these opportunities have been discussed for years; let's stop talking and start executing.”
- “Gov't has called these summits which i think is good. there needs to be more high level presence”
- “More diversity would be good, but it's a challenge in the energy sector”
- “NB needs to know about the possibilities of the renewable energy economy. We get told daily about pipelines and fracking opportunities. Gov't should also be promoting the possibilities in the future renewable energy economy. We also need to move to community based economic development as the industrial model has failed us for more than 50 years - it just doesn't work so why keep doing it?”
- “Suggere une session de 2 jours plus intance avec des objectifs precis.”
- “J’aurais aimé que le sujet de l’heure qui est directement lié au secteur de l’énergie soit discuté plus en profondeurs. Celui des gaz à effet de serre. Chaque projet contempler par le gouvernement doit prendre en considération non seulement l’impact économique, mais aussi l’impact environnemental. Ce sujet a très peu été discuté aux tables que j’ai fait partie de discussion.”