

HANSARD

NOVA SCOTIA HOUSE OF ASSEMBLY

COMMITTEE ON NATURAL RESOURCES AND ECONOMIC DEVELOPMENT

Tuesday, June 27, 2023

Committee Room

**Nova Scotia's Clean Renewable Energy Sector
Including Green Hydrogen Production and Offshore Wind**

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**NATURAL RESOURCES AND
ECONOMIC DEVELOPMENT COMMITTEE**

John White (Chair)

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Trevor Boudreau

Chris Palmer

Ronnie LeBlanc

Carman Kerr

Gary Burrill

Lisa Lachance

[Dave Ritcey was replaced by Tom Taggart.]

[Trevor Boudreau was replaced by John A. MacDonald.]

[Chris Palmer was replaced by Larry Harrison.]

[Carman Kerr was replaced by Hon. Iain Rankin.]

[Gary Burrill was replaced by Susan Leblanc.]

In Attendance:

Tamer Nusseibeh
Legislative Committee Clerk

Gordon Hebb
Chief Legislative Counsel

WITNESSES

Department of Environment and Climate Change

Lora MacEachern, Deputy Minister
Jason Hollett, Associate Deputy Minister

Department of Natural Resources and Renewables

Karen Gatien, Deputy Minister
Chris Spencer, Executive Director, Business Development & Strategic Opportunities

Invest Nova Scotia

Peter MacAskill, President and CEO



House of Assembly
Nova Scotia

HALIFAX, TUESDAY, JUNE 27, 2023

**STANDING COMMITTEE ON
NATURAL RESOURCES AND ECONOMIC DEVELOPMENT**

1:00 P.M.

CHAIR
John White

VICE CHAIR
Dave Ritcey

THE CHAIR: Order. I call this meeting to order. This is the Standing Committee on Natural Resources and Economic Development. I am John White, the MLA for Glace Bay-Dominion, and I'm the Chair of this committee. Today we will hear from presenters regarding Nova Scotia's Clean Renewable Energy Sector, Including Green Hydrogen Production and Offshore Wind. I ask you to please turn off your phones or put them on silent. In the case of an emergency, we are to leave from the Granville Street entrance and go up to the Grand Parade.

I will now ask committee members to introduce themselves, starting with MLA Taggart.

[The committee members introduced themselves.]

THE CHAIR: I would also like to recognize the presence of Chief Legislative Counsel Gordon Hebb on my right, and Legislative Committee Clerk Tamer Nusseibeh on my left.

Today's topic is Nova Scotia's Clean Renewable Energy Sector, Including Green Hydrogen Production and Offshore Wind. I ask the witnesses to give us brief introductions of yourselves. I'll come back for opening remarks, starting with Mr. Hollett.

[The witnesses introduced themselves.]

THE CHAIR: I understand Deputy Minister Gatién has opening remarks.

KAREN GATIÉN: We actually all do. We're going to do it a little differently today. We're going to walk through the presentation and give you our opening remarks at the same time, just in the interest of time.

First of all, I want to thank you very much for inviting us here today to talk about our clean energy future and how we're going to get there. It's a very important topic - not only for our departments but for the province. We're really pleased to have the opportunity to give you an overview.

We will take turns giving you our opening remarks, as I've said, as we move through the presentation. Then we look forward to answering your questions. I'll get us started, and then I'll pass it along to Deputy Minister MacEachern.

This first slide really shows our shared mandate. Over the course of my career - 35 years in May - I've really witnessed government becoming more and more aligned, more collaborative, more horizontal. Not to say we don't have lots more to do, but there has certainly been significant change over those years. It is evident, as you look at this shared-mandate slide, that the three organizations are working together on clean energy and our clean energy future.

The Department of Environment and Climate Change sets the high-level policy direction to fight climate change and to protect our environment. It's also a neutral environmental regulator. My department, Natural Resources and Renewables, helps to put a lot of that high-level policy into action. We develop clean energy sectors and invest a great deal of funding to help us advance our goals. We also have a regulatory role in a number of areas, including electricity and offshore. Invest Nova Scotia plays a key role in attracting investment and helping grow our green economy.

THE CHAIR: Deputy Minister MacEachern.

LORA MACEACHERN: A key role of the Department of Environment and Climate Change is establishing the vision or the path forward. As you're aware, government passed the Environmental Goals and Climate Change Reduction Act in 2021, which set the vision for the protection of our environment as well as our Province's response to climate change and clean growth. It contains 28 goals and serves as our strategy road map.

This legislation was followed by a climate risk assessment and an action plan: Our Climate, Our Future: Nova Scotia's Climate Change Plan for Clean Growth, which has 68 actions guiding the Province's work to mitigate the effects of climate change and adapt to the impacts. Together, this strategy framework and our tactical action plan are guiding Nova Scotia forward in having more energy-efficient homes and buildings, reducing our greenhouse gas emissions, moving from coal and oil to renewable energy and green hydrogen, protecting more of our land and water, developing our strong green economy, new jobs, and much more.

The risk assessment shows what we can expect by the end of the century if further action is not taken. There are no surprises in the risk assessment. The links between climate change, our well-being, our economy, and health and sustainability of our environment are clear.

We feel the sense of urgency and are acting. I am proud to say that Nova Scotia has the most ambitious GHG reduction targets in the country, which include to be at least 53 per cent below the levels that were emitted in 2005 by 2030, and to reach Net Zero by 2050. The Environmental Goals and Climate Change Reduction Act, coupled with Nova Scotia's Climate Change Plan for Clean Growth, are leading Nova Scotia forward to chart a new, healthier, and more sustainable course, which will benefit our people, our economy, and our environment.

One of the key ways we will achieve these targets and effectively respond to climate change is getting off fossil fuels and moving to clean, renewable energy. While the team at Natural Resources and Renewables, in collaboration with the private sector, are the lead on developing the clean, renewable energy sector, the Department of Environment and Climate Change has a key role for setting corporate direction through climate change policy, and as an environmental regulator.

As the environmental regulator, the Department of Environment and Climate Change works to protect our environment and human health through a rigorous set of regulatory responsibilities. It is important for our environmental protection laws and regulations to be clear and easy to understand. If we want industry and companies to be compliant, we need to make sure our environmental regulatory processes are easy to understand and navigate. As the regulator, our role is to steward the environmental assessment and industrial approval processes, which allow innovative new clean energy sectors to proceed while also ensuring that our environment is protected.

To support government's vision of moving to clean renewable energy, we recently updated our regulations to ensure that the green hydrogen sector has clear, easy to understand information about the environmental regulations they must adhere to in Nova Scotia. This change clarifies the environmental regulatory path for green hydrogen while also maintaining our high environmental protection standards. We can both remove

barriers for clean economy businesses and protect our environments - and we can do both well.

We're also working to modernize our environmental assessment process by 2024 - a commitment in the Environmental Goals and Climate Change Reduction Act. As a regulator, we recognize the importance of ensuring our environmental assessment process supports sustainable development while protecting the environment. We also now have business relationship managers who help companies know what is expected of them and navigate the approval process. In summary, we want companies to spend less time trying to figure out our environmental protection rules, and just be able to focus on knowing them and following them. By streamlining and modernizing our process, we expect to yield better applications and reduce the amount of time staff spend explaining our laws and regulations.

As you can see from this slide, we are working hard at the Department of Environment and Climate Change to advance the goals in the Environmental Goals and Climate Change Reduction Act and the actions in the Climate Change Plan for Clean Growth. These are just a few highlights from the past year of our accomplishments. Our second annual progress report is being finalized now and will be available before July 31st.

I'm very proud of our team and our partners, like those at the table with us today, and all that we are doing together to be responsive to climate change and chart a new, clean, and green future for Nova Scotia. Of course, we need to be nimble as we go, and pivot as needed to achieve net zero by 2050.

For example, we recently developed a new carbon pricing system for industry, which will hold them accountable for reducing their greenhouse gas emissions. We designed this new system when it became evident through the thorough analysis by the team over a year that the Province's cap and trade system - which has experienced significant operational challenges over the past four years - would not meet the new federal government standards going forward. The output-based pricing system will take full effect in early 2024. It is a key part of our path to net zero along with electrifying how we heat our homes, and our transportation systems, moving to power our electricity grid with renewable energy and green hydrogen, and make our homes and buildings more energy efficient.

I'll pass the microphone back to Deputy Minister Gatién, and look forward to answering your questions at the end of the presentation.

THE CHAIR: Thank you. Deputy Minister Gatién.

KAREN GATIÉN: As Deputy Minister MacEachern has outlined, Nova Scotia has legislated climate change for 2030, and the climate action plan outlines how we'll get there and beyond. Greening our grid is a big part of that work. To reach our 2030 goals, we need

to move off coal at eight power stations, and we need to develop new renewable energy sources. There is no silver bullet here. It will take a suite of solutions to reach our goals, and we are most interested in made-in-Nova-Scotia solutions.

We already have some wind, local hydro, and other renewables on the grid, and we are just about getting our full share now from Muskrat Falls through the Maritime Link. That brings us to about half of our electricity from renewables. Wind power is the cheapest renewable there is in Nova Scotia. The RFP we completed last Summer is bringing five new wind projects online, assuming that they clear all the necessary approvals. That will add about 12 per cent more renewable electricity by 2025, and it brings our system to more than 60 per cent renewables.

Residential, commercial, and community solar will add at least another 5 per cent or more, and we will do another request for proposals for renewals to support the Green Choice Program. It's another one of our Climate Action Plan commitments. It will make buying renewable electricity a choice for large-scale electricity customers, including public institutions like health care facilities, public schools, universities, and governments.

Projects to support Green Choice will add at least 10 per cent or more by 2027, like wind, solar, or a combination of both. Plus a number of major firms are developing wind or solar on their own, which will add even more. We are actually on track to exceed our goals to get off coal and have 80 per cent renewables by 2030, both in terms of the amount of renewables and how fast we can get them on the grid. In fact, by the end of 2030, we anticipate having 88 per cent of our electricity from renewables. There will be no coal in the mix. The exact percentages of different renewables may shift a bit because we always have to be flexible and nimble to adjust as the landscape continues to evolve.

There's also been a lot of discussion about the Atlantic Loop. We may still pursue that project - after all, we still need to reach net zero by 2050 and it might help us get there. But the Loop has never been the sole solution we were pinning all our hopes on. It's not the lowest-cost option for Nova Scotians, and it will take a significant federal investment to make it happen. To date, we still have no firm dollar figure for an up-front capital investment to build this large project, and the only offer on the table is a long-term loan that ratepayers would be repaying until 2075. That's not a good deal for Nova Scotians.

We have many other solutions and paths to meet our 2030 goals, most of them made in Nova Scotia and fueling our green economy here at home. One of those is battery storage. As we add more renewable electricity, we need to be able to store some of it, especially for the days when the sun doesn't shine and the wind doesn't blow. That's why we amended the Electricity Act this Spring - so government can procure energy storage options like large-scale batteries. There is great innovative work happening on this front right here in Nova Scotia, so we're opening opportunities to the private sector. This will allow us to take advantage of innovations that are happening in this field and to do it quickly.

Greening transportation is another part of our path to 2030. We continue to encourage people to make the switch to electric vehicles. This year we invested \$1.5 million in charging infrastructure and \$1 million to incent businesses to buy medium- and heavy-duty EVs, or electric vehicles, like dump trucks, transport trucks, and so on.

[1:15 p.m.]

This is on top of the \$16 million we rolled out last year to incent people to buy passenger EVs and e-bikes. We also continue to fund public and active transportation projects with our federal partners.

Now let's talk about getting to 2050 and beyond. Our 2050 goal is to reach net zero, and again, it will take a suite of solutions to get there. One of these is geothermal. There are a number of communities around the province where the geology suggests there is good potential. One example is in Springhill, where they've been using geothermal for many years, but there are other communities that, while less advanced, are ready and interested to learn more about the possibilities.

Then there's green hydrogen. It's a clean alternative to fossil fuels. The world market is demanding green hydrogen, so there's a lot of economic opportunity for Nova Scotia. We expect much of the green hydrogen produced here to be exported, but there are domestic uses as well. It can help us make the transition away from fossil fuels, especially in sectors like transportation where it's harder to do.

Green hydrogen production will start with onshore wind, but really needs offshore wind to scale up. We're fortunate to have some of the fastest, most consistent offshore winds in the world, and will use this natural resource to our advantage. That's why we set a goal to offer leases for 5 gigawatts of offshore wind.

A couple of weeks ago, we released our offshore wind road map to help get us there. It's another action in the climate action plan. The road map sets our vision for this industry and outlines the regulatory path for businesses to invest in the opportunity and in projects. We expect this resource will primarily drive the green hydrogen sector, but there will be enough capacity for other uses here in Nova Scotia as well.

As we advance all our work for clean renewable energy, we're continuing to look at options to help us keep life affordable for Nova Scotians and to make sure they have reliable electricity service. As Deputy Minister MacEachern mentioned earlier, the Province has invested over \$220 million in energy efficiency programming. This figure includes \$140 million that was announced in December for energy efficiency and heat pump programs. We also invested \$12 million more for a second phase of the Mi'kmaw Home Energy Efficiency Project.

These programs help Nova Scotians save money on their energy bills. They make people's homes more comfortable, and they reduce the emissions that cause climate change. They also support our green economy and workforce, employing more than 2,500 people in good-paying jobs, many of those in rural Nova Scotia. We are committed to supporting these made-in-Nova Scotia solutions for clean energy.

As we work on green energy, we also need to ensure reliability. That includes having backup energy resources that use a variety of fuels. Eventually, we could be moving to green hydrogen or biofuels for that.

I also noted energy storage earlier, to make sure that energy is available when we need it. This could include large central batteries, batteries in homes, or even integrating the batteries in your EV.

We also need to make sure that the grid is resilient, especially in the face of severe storms, hurricanes, and other weather events. That is one reason why we increased penalties and we are adding reliability standards for Nova Scotia Power - because Nova Scotians deserve better than they've been getting.

Before I wrap up, I do want to note that some aspects of achieving our climate change goals involve the use of Crown lands. We do not have much of it. The vast majority of land in Nova Scotia is private. Government is working very hard to balance all of the competing interests for the land that we manage. Our recent work with green hydrogen developers is a good example. Last year, several developers came to us looking for Crown land leases for wind farms to support their operations. We worked through a process with them to consider that land use, and we reached a decision that would position Nova Scotia to become a world leader in green hydrogen.

Ultimately, we are always considering a wide range of social, environmental, and economic benefits associated with the use of publicly owned land, both today and in the future.

There is lots more to talk about, but I will end it there and pass it over to Peter. I look forward to expanding on our work as we answer your questions.

THE CHAIR: We have a question from the honourable Iain Rankin.

HON. IAIN RANKIN: No, let him go. I'll go on the list.

THE CHAIR: Thank you. President and CEO MacAskill.

PETER MACASKILL: Thank you, Deputy Minister Gatien. Invest Nova Scotia is focused on growing the Nova Scotian economy. We help local companies export more goods to more markets. We also foster innovative startups, and we attract new businesses

here. It's our responsibility with key partners to guide companies through locating and expanding in Nova Scotia.

It comes down to this: We are a partner in realizing business opportunities for Nova Scotia. Yet there are multiple barriers, especially for small- and medium-sized firms in Nova Scotia. For several years as a pilot, and now as a permanent program, companies are working with Invest Nova Scotia and using the Innovation Rebate Program to help them adopt new technologies and solutions more quickly, increase production capacity, and adopt cleaner and more sustainable approaches to growth here in Nova Scotia.

For example, Balamore Farm in Colchester is increasing local food security, extending the growing season, and in addition, energy efficiency is anticipated to improve by 20 to 40 per cent with modern coolers and insulation. Lewis Mouldings in Digby County is eliminating 24,000 litres of fossil fuel-sourced propane annually as the fuel source for drying and finishing products. Oxford Frozen Foods in Cumberland County will reduce CO₂ by 2,000 tonnes annually and increase energy efficiency from 50 per cent to 80-to-95 per cent with new gas burners.

When Invest Nova Scotia attracts new, mature, multinational exporting firms into our province, they contribute to the economic growth and innovation landscape, enabling domestic companies to enter global markets through partnerships and relationships with these businesses. FDI helps integrate host economies in the global value chains and global production networks.

Over the past few years, Canada and Nova Scotia have made significant commitments to sustainable development, climate change mitigation, and clean growth. What's happening globally and locally matters. Simply put, investors and customers expect businesses to be moving forward sustainably, which is a fact of business and an opportunity for companies here, like Michelin. I'll talk more about that later.

When speaking about clean energy, offshore wind, and green hydrogen, those are part of Nova Scotia's overall clean technology sector. It includes energy storage, bio-economy products, and advanced materials, carbon capture, storage, and green hydrogen. There's been significant interest in Nova Scotia as a location for green hydrogen production. Exportable and domestic use, green hydrogen presents a strong economic opportunity for the province.

Nova Scotia has a strong track record in energy storage. It's home to world-class battery innovators and industrial players. This means there are many opportunities for innovators, entrepreneurs, and business leaders to come and collaborate as part of Nova Scotia's growing battery technology sector.

Our province boasts a thriving industrial biotech sector with innovative speciality research centres that support technology-enabled R & D and commercialization for the

bioeconomy. The Verschuren Centre received \$2.5 million from the Department of Economic Development to expand their biomanufacturing facilities into a national bioprocessing centre with 10x the bioreactor capacity. This is in addition to \$2 million from ACOA, \$2.3 million from NGen, \$1.5 million from the Verschuren Centre themselves, and \$500,000 from DeNova. The new facility will be a first of its kind in Canada, and result in an initial 40 jobs with an aim to attract 10 new companies per year.

The Verschuren Centre inspires a collaborative, shared goal of accelerating the transition to a green and circular economy. The institution also acts as an intermediary between small and medium businesses and large corporate companies to smooth the collaboration process, ensuring SMEs are a strategic fit and align with the corporate's long-term strategic objectives.

For example, one of the largest private employers in the province is Michelin. Michelin is actively working to recycle, reuse, and repurpose industrial materials to divert from landfills with the goal of diverting 100 per cent of its manufactured waste from landfills by 2030. They're also actively working on reducing CO₂ emissions by 50 per cent and reducing energy consumption by 37 per cent, also by 2030. The company has engaged the Verschuren Centre to explore other opportunities for sustainable and clean energy solutions, as well as learn more about biosustainable materials.

The last slide I'm going to show you is a clean tech sector video. Nova Scotia offers a compelling suite of strengths, combining the right vision, people, companies, and supports to encourage growth and new players; world-leading researchers and technology; home to leading industry players; highly skilled talent pool and pipeline; geographic proximity and logistics infrastructure to access North American and European markets; existing free trade agreements with key markets; supportive government and regulatory environment working toward net zero with ambitious interim targets

In the language of business, there is a unique value proposition for Nova Scotia. We package and present that value proposition in examples such as this clean technology sector video.

[A video presentation was played.]

Thank you.

THE CHAIR: We are obviously in for a great meeting. I think there's lots of interest in this topic for sure, so that's excellent. As I open the floor for questions, I want to remind members to give me a wave or I'll keep circling the room as much as I can, but I am captivated by what's going on here, so make sure you get my attention. I will ask that follow-up questions be directly related to the original question, just because there seems to be so much interest. Right now to start I have the honourable Iain Rankin, MLA Lachance,

MLA Smith, MLA Taggart, and MLA MacDonald already. Obviously, the interest is there, so if we can just keep the questions precise.

Other than that, I just want to remind everybody to wait until I call your name so your microphone turns red, so Legislative TV can record what we're saying here. I pass the floor over to the honourable Iain Rankin.

HON. IAIN RANKIN: Since you mentioned the Atlantic Loop, I do have a couple questions around that potential project. Just to recap my understanding, back in 2021, the government came in, had a big meeting with stakeholders - Nova Scotia Power - and effectively said at the time that they needed investment to start the work before the end of that calendar year, only talked about the Atlantic Loop. Now we're in 2023, where we're seeing a lot of cold water being thrown at that project. The answer that we continue to get from the Premier especially is a list of renewable energy that we've been working on in this province for a long time: solar, wind, and tidal, and apparently now even nuclear is on the list with that answer.

My understanding, and I see myself as a layman on this topic - I certainly don't have the subject matter expertise that you all have - is that in every viable scenario, at least when we were in government, in every analysis, to get off coal by 2030, we needed to have an upgraded transmission line, that is a secondary line into New Brunswick, also known as the next leg of the Atlantic Loop project. That is the Onslow Line, which at the time was estimated to cost \$300-some million. I think the last estimate I saw was about \$500 million.

Is it the position of the government that I'm reading now - and it's a pretty definitive statement - that it is not the lowest-cost option for Nova Scotians? It begs the question: Is it not now in the plan for that construction of that leg of the Loop to be undertaken, which in my understanding, does unlock more renewable energy? It was mentioned in the document that wind is the cheapest form of energy. It unlocks another 400 megawatts of wind, and it enables 200 megawatts of battery storage, which was also mentioned. A very critical piece, in my view, is to get going on that secondary transmission line, so my question is: Is that part - which I've never heard the Premier state - still part of the plan, or is there actually a viable alternative without at least that portion of the Atlantic Loop project?

THE CHAIR: Deputy Minister Gatién.

KAREN GATIEN: At this stage, we would agree. We call it the inter-tie, but it's the one from Onslow to Salisbury in New Brunswick. I think Nova Scotia Power refers to it as the "no-regrets." There are certain no-regrets options, and we would agree with that - that is a crucial inter-tie, and one that we do need to get going soon rather than later, I agree. The cost has gone up a bit, but I would have said about \$600 to \$700 million. I could be off a bit, but I could check on that.

[1:30 p.m.]

IAIN RANKIN: I'm happy to hear that at least at the staff level this is still part of the way forward. Since Bill No. 212 was passed, my understanding is - correct me if I'm wrong - the project has been paused. I actually tried to look this up to see if that's still the case. I'll table the document that shows the capital plan produced by Nova Scotia Power to the UARB, where pretty well every initiative that has anything to do with what was called the Eastern Clean Energy Initiative - which was basically the Atlantic Loop concept - this has been around for a long time. I highlighted all of these that are now deferred - it even mentions the Onslow project - or at least part of the project, as being deferred.

The members can see that that critical piece that allows us to start to close coal plants - and three of them, by the way, are now late, out of the eight that we have in this province - that has been delayed. It's probably arguable whether that bill in itself delayed the project, but certainly I would submit that it's problematic that that piece of infrastructure is delaying us from getting off more expensive fossil fuels.

I want to ask the question, because I know at the time there was federal funding eligible for this upgrade. I want to ask very clearly if the Province has applied for any federal funding to offset ratepayers, to make sure that this Onslow Line gets built as soon as possible, and when it will start.

KAREN GATIEN: We have not applied for funding. I will say the funding - I know there's been media coverage about the federal funding - those were deals with the utilities. Certainly, we were in the room when they talked about - we don't have anything formal - what the potential was in terms of loans. The Onslow to Salisbury inter-tie was always part of the conversation. I can't speak to Nova Scotia Power's reasons for pausing, but they've certainly been in regular conversations with us around what we're going to do, how we're going to move this forward.

There's been an interest in battery storage and an interest in how we move the inter-tie forward. My comment would be that it wouldn't be federal funding to the Province necessarily. It would likely be to the utility at this point in the form of a loan.

THE CHAIR: Deputy Minister MacEachern.

LORA MACEACHERN: I just wanted to add a couple of comments not specific to the Loop, but in your first question, you mentioned about the same projects that have always been worked on. I just wanted to address that, because it certainly doesn't appear that it's business as usual here in the province. There has been quite a bit of activity just in the last couple of months, I can say. As the regulatory agency in the province, we've had a huge increase in the projects that are coming through our environmental assessment process. As you know, the renewable energy projects do come through our environmental

assessment process. We've had eight projects through just since January alone, two of them being green hydrogen projects, six of them being wind projects.

We know from our conversations with industry that many more onshore wind projects are projected or are in the offing to come through our process in the very near future. There's lots of activity that is happening in the renewable energy sector here in Nova Scotia, and - as Deputy Minister Gatien said in the beginning about there not being any silver bullet - there is a broad sweep of actions and activities that are required to achieve our climate change goals. Those are reflected in the climate plan, and we're also seeing that activity on the ground with a number of projects that are coming forward just through our process alone. I just wanted to add that.

THE CHAIR: Thank you.

IAIN RANKIN: Could I just comment on that?

THE CHAIR: A quick comment. MLA Rankin.

IAIN RANKIN: Those are all great things. We need more wind. We need all kinds of renewable energy. But those are primarily variable sources that won't displace coal-fired generation plants, and that's what I'm trying to get at today. It is a huge economic and environmental liability that we continue to burn coal.

We just saw a 14 per cent increase in power based on fuel cost increases that are primarily coal and fossil fuels attached to the market. The urgency needs to be there to start to find ways to get baseload renewable energy - baseload non-emitting sources.

I'm just not hearing any alternative, and the department is now saying that it's not the lowest-cost option. How can you say that without actually laying out a plan for Nova Scotians to see what the alternative options are? You can't just say it's solar and wind.

THE CHAIR: Order. You asked for a quick comment. I didn't want another question. Sorry. I did give you two. I'll come back to you, I'm sure.

MLA Lachance.

LISA LACHANCE: I wanted to follow on the conversation around green hydrogen. During Budget Estimates, the Minister of Natural Resources and Renewables didn't provide a lot of details in terms of the hydrogen strategy consultation and roll-out process. I'm wondering if you can provide an update on that.

At the same time, I know the minister also seemingly said that in the strategy, the question of whether it be grey hydrogen or blue hydrogen, or green hydrogen would be a

business decision for folks to make. I'm wondering, is that still the policy position of the department as you're working on the strategy?

THE CHAIR: Deputy Minister Gatién.

KAREN GATIEN: I'm going to ask Chris Spencer to speak to that. He's leading the work on hydrogen.

THE CHAIR: Mr. Spencer.

CHRIS SPENCER: Obviously, this is a very important strategic area that's drawing together all parts of government - I should say "governments" - as well as local communities and a number of organizations as well as industry and potential investors. It's very much a collaborative, inclusive effort - very long-term minded, as I say, strategic but far-reaching in many ways. This is not economic opportunity. It's about meeting our own clean energy needs as well, as we talk about baseload opportunities to back up the strength of our world-class intermittent renewables.

Hydrogen provides that foundation. It's through the scale of exporting these emerging resource opportunities that we domestically can benefit from a much more secure and reliable form of energy. That ticks the box of meeting our energy needs and ticks an important box in terms of our economic future and sustainable prosperity.

I'm very pleased that you followed up on our minister's comments during Estimates about our plan in this important area. We are working with a trusted advisor that's worked with us in many constructive ways across the green transition - Clean Foundation. In the work that we've done with the Clean Foundation so far, we have an end objective to deliver a plan - an action-oriented plan. We call it the green hydrogen action plan, so perhaps that answers your other question in terms of what colour we're focusing on.

I think for the benefit of everybody, in terms of these colours, green hydrogen means zero carbon hydrogen. It's zero carbon because it's backed up by our world-class intermittent renewables, which through a vertically integrated approach optimizes the economic opportunity in addition to that strong environmental imperative.

Working with the Clean Foundation and the scope and breadth of their experience, and working with a number of our partners throughout the energy transition has given us a very well-rounded approach to the green hydrogen action plan. Thinking domestically, thinking export - export being that linchpin of scale, economies of scale, to make this really a secure and viable option.

My deputy minister, earlier in her opening remarks, mentioned all options need to be on the table. It's a very heavy lift to get to net zero by 2050, but 2050 is around the

corner when it comes to these nascent forms of clean energy. So this is an important option for us to be exploring actively.

The latest update that I have from that teamwork that's happening, led by my branch in collaboration principally with Clean Foundation, is we've identified 29 deliverables - 29 action areas across seven broad objectives at this point. They hit upon a number of the core areas, but nothing is more important than social acceptability. If we don't get that right and get that right from the outset, we're going to poison the well, as they say, and that's going to be counter to our important strategic interests in this area.

LISA LACHANCE: The hydrogen innovation program, which was created in legislation, is that being implemented now or is that being further developed as part of the strategy?

CHRIS SPENCER (off-mic): No, that's on its own track.

THE CHAIR: Mr. Spencer.

CHRIS SPENCER: Sorry. Learning the rules here, Mr. Chair. Red light on, I can speak. Sometimes, maybe, my wife needs one of these. (Laughter) Sometimes I'm too much into my phone at the dinner table. If she had one of those - speak now, let's have a conversation. Anyway, sorry about that aside.

We mentioned earlier, the inter-tie being no regrets - innovative programs are no regrets. We need to begin setting the stage, and we think that what we've done with the hydrogen innovation program was a key stage setter, establishing those winning conditions - sending sight lines to industry, more than anything, as to our intentions in this area. So we can shoot out ahead of that collaborative work with the no-regrets opportunities - obviously informed through a lot of dialogue and investigation on our part, but we feel that hydrogen innovation program is a key early mover. We are working as quickly as we can to implement that program.

THE CHAIR: Thank you, Mr. Spencer. After two years of learning the rules, I know I can call on MLA Smith for next question. (Laughs)

KENT SMITH: I'll echo the Chair's sentiments from earlier that this is a great meeting, a great topic. So much talk already about green hydrogen. I can tell you that pre-2021 and even early in 2022, I couldn't tell you the number of times I'd heard green hydrogen. Actually, I could: it was zero because I didn't know what it was - but in the last year and a half, it's become a major topic of conversation.

I know you've talked about it a little bit in the opening remarks, and I know, Mr. Spencer, you just referenced it a little bit in your last answer, but I'm curious to know about

what the true potential is for green hydrogen for our province. Is there a ceiling on how much it can help us advance?

[1:45 p.m.]

CHRIS SPENCER: A very good question. We believe that the opportunity is virtually unlimited in Nova Scotia because once again, this ties to the strength of our intermittent and renewable resources. The onshore, which has been a focus of conversation so far today, is an important piece - certainly a runway as we're pursuing green hydrogen.

Just to give you a little metric, when it comes to the business case for green hydrogen export, 70 per cent of that business case is the upstream green power supply for that zero carbon form of energy. That obviously ties into what is the size and potential of that green power supply in Nova Scotia.

The offshore really unlocks the value prop for the scale and scalability. It's uniquely suited to hydrogen development because it achieves the ultimate scale to tie into the economics required for doing international trade in green hydrogen, but it's also scalable. This is building blocks. This is not developing a Muskrat Falls or a nuclear power plant. This is very much building block stuff that can be done in a much more sensibly minded, responsible way, ensuring that we have social acceptance along that development curve. We feel Nova Scotia's ideally suited in the global marketplace to play into this emerging area of international trade.

KENT SMITH: I had a completely different follow-up, but based on something you just said - and you said it in your previous answer - I'd like you to explain it a bit more. The social acceptance that you're talking about, can you give us a little broader definition of what you mean when you say social acceptance? I have a basic understanding, but from your department's point of view.

THE CHAIR: Mr. Spencer.

CHRIS SPENCER: A very important question, obviously. This would resonate with all the members here at the committee. This is about the people who put you into office. This is about Nova Scotians. It's not about companies necessarily. It's not about those who bring a particular agenda. There's a lot of that out there - a lot of so-called stakeholders and public interest groups, all very well-respected. This is about Nova Scotians. We can't talk about social acceptance without starting with education. We need to build through the foundation of understanding. We need to approach this sensibly, and sensibly means approaching it based on facts. We need to make sure Nova Scotians understand the opportunity.

Nothing is without risk. That's the world we live in, and certainly, we've got the climate change imperative, pushing us forward to take on new risks and explore new areas.

The trial, learning, innovation - that all has to be done as safely as we can, and that's through informed consent. That comes through formal processes like we're doing for offshore wind, with the regional assessment process. It also comes through many other informal mechanisms, through the efforts of all, through the efforts of you with your constituency offices.

We need to make sure that people are drawn into the conversation. There's important work being done by Net Zero Atlantic, an NGO that works actively in this space. Their name says it all. They've received funding from the federal government for a capacity-building initiative. Two important communities within Nova Scotia - we'd certainly start with First Nations, the Mi'kmaq. There's a lot of important work that's happening there. When we think about local communities, there's nothing more community-minded than our fishing industry. So thinking about how we can safely undertake this in an inclusive way: hearing people's concerns from the outset, not informing them of our ideas late in the game, but getting them into part of the investigation early. That's what builds trust and confidence, that inclusion. That's an important piece in gaining that social acceptance.

THE CHAIR: MLA Taggart.

TOM TAGGART: My question is to Deputy Minister MacEachern, if I could. I think we can all agree that clean energy is the way of the future and working towards it is critically important. Deputy Minister, can you explain why this is a key target for the government in reducing carbon emissions, as opposed to keeping the old cap and trade system in place?

LORA MACEACHERN: Yes, we are completely agreed that taking action urgently on climate issues is really important, and reducing GHG and being really focused on the reduction of GHG emissions is critical. That's why the Environmental Goals and Climate Change Reduction Act that was passed in 2021 contains some ambitious targets in that regard. We're very focused on that.

As we look back on the cap and trade program that has been in place here in Nova Scotia since 2019, we're just in the process of winding that down, as you know, and transitioning into a new approach with a provincially based output-based pricing system - the new climate plan, and the new Nova Scotia Climate Change Fund. We have this opportunity now as we wind down the program to look at it and see what the experience here in Nova Scotia has been with that climate change program. What we have come to know is that it's been quite challenging to implement here in Nova Scotia.

This is a very small jurisdiction, Nova Scotia, compared to what cap and trade programs are typically designed for: bigger markets where there are more participants and the ability to do more trading. That's not present in Nova Scotia with a small number of participants.

We also have a cap and trade program that's been in operation that was very reliant and premised on the ability to give free emission allowances to fuel suppliers. That is not something that is part of, for example, the Quebec linked cap and trade program that it operates with California, and it's not something that's allowable under the new federal requirements that are now in place for 2023 and going forward.

One of the fundamental aspects of the program that has been in existence, which was to allow free emissions - something that is not typical in cap and trade programs - is no longer allowable. The other thing that was very important to the cap and trade program that is being wound down, is it was premised on Muskrat Falls energy being available at a certain time. That did not materialize on time, so that has caused challenges with successful implementation of that cap and trade program in Nova Scotia.

When you look at both the cap side and the trade side of cap and trade, there have been challenges. We've only ever had one trade in the cap and trade program in Nova Scotia since it commenced its actions in 2019. So the trade side of cap and trade - 50 per cent of what gives it its title - has not happened in Nova Scotia. Now if we look at the cap side of cap and trade, we've had the circumstance where our largest emitter in Nova Scotia - Nova Scotia Power - found itself unable to meet the cap under the program. So in order to not negatively impact the ratepayers of Nova Scotia, government found itself in the position of having to amend the cap and trade regulations and provide more allowances so that there could be a pathway to compliance for our largest emitter.

As we look back on the program, we can see that there were numerous challenges with its operations here in Nova Scotia, and it really didn't live up to its name of cap and trade. With the new federal requirements in effect as of 2023, which prohibited the free allowances to be given to fuel suppliers, it became no longer an option in Nova Scotia. That's why it is no longer in place, and the Province pivoted to a strong, new option for Nova Scotia, which we're now in the process of transitioning to. It is a provincially-based, output-based pricing system, which really targets the large emitters, holds them accountable, is an incentive to reduce GHG emissions here in Nova Scotia, and is an option that keeps things affordable for the ratepayers of Nova Scotia.

That coupled with our five-year climate action plan and our new Nova Scotia Climate Change Fund, we're really focused on the future. We feel very confident that we're going to be able to meet our climate change goals.

THE CHAIR: MLA Taggart, you have a follow-up.

TOM TAGGART: Just last evening or late last afternoon, I was listening to this news radio show with this whole carbon tax, cap and trade debate going on. It was stated very clearly on that program - I know it was a rerun, but anyway - the moderator was making the point that the government should have continued with the cap and trade. I believe that you've just indicated that this whole - so was it possible? I understand it better

here where you said how Nova Scotia Power couldn't meet the threshold, and so we had to give in to them, in a sense - I forget your wording - or else our ratepayers would pay the bill - but that option was not available. That would be giving some freebies to Nova Scotia Power - however we want to frame that.

That debate continues to go on. We hear it all the time. Was cap and trade available to the Department of Environment and Climate Change in 2021 or 2022 when we are facing the federal carbon tax? Was it available?

LORA MACEACHERN: No, that option was not available to Nova Scotia. The new federal requirements that came into effect as of 2023 increased the stringencies across the country. One of the key things that it did was not free up emission allowances to fuel suppliers, and that was a fundamental part of the existing cap and trade program, the one that is being wound down. That is no longer available and had not been a function or a part of any cap and trade program - not part of the Quebec program - and no other province in the country had operated a cap and trade program, and are not doing so now.

So no, it is not an option. It was very clear under the federal requirements that took effect as of the beginning of the year.

THE CHAIR: MLA MacDonald.

JOHN A. MACDONALD: I think this is going to go to Mr. Spencer, but only for the conversation about social that you're talking about. I live in an area where - no offense to MLA Taggart - we've got the best side of the Bay of Fundy. He's got the other side.

I have some youth who are very concerned over many things. The big thing is that we have a lot of youth who've decided they've got to go elsewhere to work. What are we doing to engage our youth and show them that there are opportunities in this new world? It takes 20 years to change. If you don't start with the youth and get them going, all you're doing is spinning your wheels, because the youth will come up and they'll drive it.

THE CHAIR: Mr. Spencer.

CHRIS SPENCER: I was just going to take it to hand it over to my boss, because I know her background, which is perfect for this.

THE CHAIR: Deputy Minister Gatién.

KAREN GATIÉN: I'll start, and I know Lora wants to say a few words as well.

Thank you for the question. (Interruption) No, no, I can understand why you asked. Great question. It is an area that I know Chris and others have heard me talk about as well.

We have what we call a deputies' green hydrogen table that we've put together as this was starting, just to make sure we were working together - part of that horizontal collaborative work I'm talking about. Deputy Minister MacEachern sits on it with me - Justin Huston, Deputy Minister of L'nú Affairs; Scott Farmer at Economic Development; David MacGregor is there as the ADM of Priorities and Planning. I think I have everybody.

We just added Ava Czapalay, Deputy Minister of Labour, Skills and Immigration. When I say "just" - within the last six months, for that very reason - because I agree with you that you can't wait. Even adults who want to retrain - it's not just youth, but youth are very important, of course. We need the employees to turn and say, by the way, we'd like you to be ready to work in hydrogen and green tech. We have certainly put that on her radar. I know that she has talked to her team and they're putting their heads together around how we start to get people ready for that.

Certainly, my colleague at the Department of Education and Early Childhood Development and our colleague at the Department of Advanced Education will be engaged as well, but the skills-training piece of it is where we've first focused.

I think getting more young people to think about it - sort of what Chris was saying earlier - is for people to understand it, to want it, to know what the benefits are. That's how you get people engaged so that they actually see that there are actually opportunities there. I remember when I was in Workforce Development and Education before - moms are the biggest influencers, by the way, of your kids going on - they believed there was no future in computer science. So we had a whole group of kids who didn't want to study computer science, and it was all linked to Y2K and all of that.

I think the more we can have people fully understand it and see the benefits, the better off we'll be.

THE CHAIR: Deputy Minister MacEachern.

LORA MACEACHERN: Thanks very much. I'm really glad you asked that question, because it gives an opportunity to mention just a couple of things that are happening with our department in conjunction with Clean Foundation.

One recent announcement made by Minister Halman - and it's a follow-up to an action that is set out in the climate plan - is about a Youth Climate Council. That would be a first of its kind here in Nova Scotia, and one of very few across the country. The Clean Foundation is our partner on that. The application process is under way right now. I think it's until June 30th that youth across the province who are interested in being part of this Youth Climate Council can put in their applications.

We're really excited about it. It's an opportunity for youth whom we know are quite concerned about the climate crisis to be able to impact public policy in a more formal way.

They'll have a connection into the department and into government to bring forward their ideas and perspectives, and play a more formal role. We're happy about that, and if anyone knows anyone who might be interested, they can get their applications to the Clean Foundation. There's information on the website.

[2:00 p.m.]

The other thing I just quickly want to mention is about the youth internship program. Every year Clean Foundation, through funding from government, operates a youth internship program. Companies across the province can receive grants to hire youth to do work on issues around renewable sector matters, climate change issues. It's the largest cohort there has been so far - just over 150 students working across the province and building that expertise and that capacity for their jobs in the future.

JOHN A. MACDONALD: The reason I mentioned youth is because in all honesty, they're the ones who do drive it. For the Y2K, yes - when I was in school, it was the thing. (Laughter) They were going, you don't need to take trades - which is the most stupid thing that we ever told people. So I don't know how they thought things were going to get built.

You mentioned the youth, and I just need to know a follow-up for it. Can you define youth? I have an idea of youth - younger than MLA Leblanc. (Laughter) What is it, so I know who I'm going to be saying: You need to go fill out this application for it? That's my follow-up.

LORA MACEACHERN: That is a great question. I do remember from my days at the former Department of Labour and Advanced Education, this question of what the threshold is for youth is very alive. But for the purposes of the youth climate council, I believe it's up to 24. We're double-checking, but I believe it's up to 24. We'll let you know for sure.

THE CHAIR: MLA Rankin. Sorry, just to explain, MLAs Leblanc and Rankin switched positions on the speaker list. That's the only reason you didn't jump ahead.

Mr. Spencer.

CHRIS SPENCER: I'd just like to add, the green hydrogen action plan I spoke of earlier, one of the seven goal areas is about investing in skills development - obviously a strong focus of that being in youth, but let's not forget that green transition is a disruption to many skills areas. Thinking about this in a transitional way, what many refer to as the just transition - I think that term's been a little bit overused - but figuring out how these new opportunities can serve those who are facing some disadvantage and upheaval through this process. Let's not forget about that segment of our population.

THE CHAIR: Just for clarity, my next three speakers are MLA Rankin, MLA Susan Leblanc, and MLA Ronnie LeBlanc.

MLA Rankin.

IAIN RANKIN: I wanted to keep going on the Atlantic Loop, but since my friend Mr. Taggart brought up cap and trade - his question was: Is cap and trade still an option? I'm not sure, deputy minister, if you heard that the same way that I heard the question. The question wasn't: Would the old cap and trade system continue to work? I'm looking at the website right here under the Pan-Canadian Framework on Clean Growth and Climate Change, and it clearly shows - I don't have it to table, it's on my iPad - cap and trade is still an eligible option for carbon pricing. The plan the Province proposed had no pricing of pollution at all. That's why the backstop is being implemented.

I just want to ask directly - because we have a province still maintaining a cap and trade system, the province of Quebec. We're a member of the Western Climate Initiative, and so are they.

I just want to ask directly: Was there a possible path for Nova Scotia to have a cap and trade system from 2023 to 2030 as long as they followed the new guidelines and potentially even linked to a jurisdiction like Quebec - just so that we're clear on the facts of what's in the Pan-Canadian framework?

LORA MACEACHERN: I appreciate the opportunity to provide additional clarity. As was mentioned, the 2023 federal standards that have come into place increased the stringency. As I mentioned, the existing cap and trade program, the program that's in the process of being wound down, was very much premised on the ability to give free allowances to fuel suppliers. That's a critical element of the program and is not an element of the Quebec-linked program with California. That is an element that is specifically no longer allowed under the new federal requirements. With the removal of that option as part of a cap and trade program in Nova Scotia, it became no longer an option to be able to have an internal cap and trade program in Nova Scotia.

We did look at all of the other options. We looked at the option of whether a linked cap and trade program with Quebec and California could be an option. What we found with that analysis is that Nova Scotia is the smallest of the jurisdictions. It's a small jurisdiction, so the challenge that our companies would face is that there would be an outflow of revenue from Nova Scotia into those larger jurisdictions. So it's very important for Nova Scotia to protect its own interests and have the benefits of that revenue right here in Nova Scotia. When a team looked at that analysis and did that work, a linked cap and trade program with Quebec and California would not be something that would be eligible and beneficial to Nova Scotia.

We can assure you that we looked through all of the options, and where we landed, we are very optimistic about. We've created and focused on a provincially based, output-based pricing system. It is Nova Scotia created. We have assurance from the federal government that it is compliant with their requirements. It focuses on those large emitters that produce 50 per cent of the emissions here in Nova Scotia. It holds them accountable. It incentivises GHG emission reductions right here in the province. We have the ability to keep the cost impacts for Nova Scotians minimal compared to what would have happened if a federal OPBS system had been imposed on us.

We're pleased with where we have landed. We feel like we've made the right decisions for Nova Scotia, and we're backing that up with a really ambitious five-year climate change plan and a new Nova Scotia Climate Change Fund, which will fund the actions that we need here in Nova Scotia.

IAIN RANKIN: That decision and that system does come with the carbon levy at the pumps - so that is triggering the 14 cent increase that's happening on July 1st. What I would say to your answer is that eligibility and what's beneficial are different things.

You went on to say what we would have to do, but you said it wouldn't be eligible - but it clearly is eligible. You could make the argument that it might not be beneficial in your opinion, but in any analysis I saw, and in Quebec, it'll be proven to show that the cost at the pump for cap and trade will be lower there. I think that should just be clear that it is eligible. If the government thinks there are more risks than they're willing to take, that could be said, but I don't think it's really fair to Nova Scotians to say that there simply was no eligibility.

I understand the allowance piece. I know that most of our allowances were given to fuel suppliers. Not all though - or we wouldn't have the one cent at the pump. There was a percentage of allowances that were auctioned, and will continue to be through 2023. I think there are at least two more auctions happening. So obviously the element of risk isn't high enough for the Province to cancel those auctions and continue with the system until 2024 when the new OPBS system comes into play.

I just want clarity. I think it should be admitted by the department, that all provinces still had an option for a cap and trade system as long as the eligibility - which is publicly available online for anyone to see under the federal government's website - that there were options. That's why an analysis was taken by the department because there were indeed some options to look at.

THE CHAIR: Before I go back to Deputy Minister MacEachern for a reply, MLA Rankin, I would ask you to forward that page as a link to the clerk, perhaps - and that'll be tabling the document for us.

Deputy Minister MacEachern.

LORA MACEACHERN: The additional comments that I would make are, again, pointing out that the existing cap and trade program - the program that is being wound down that has been in operation from 2019 to 2022 - is no longer an option. It is not compliant under the new federal requirements. That is what the department has communicated publicly. That's what government has communicated publicly - that the current program is not eligible under the new federal standards. That is what we've had to say.

In terms of the carbon tax, that is a federal decision and a federal requirement. It's for the federal government to explain that. What we're focused on is our provincially based, output-based pricing system, our climate plan, our Environmental Goals & Climate Change Reduction Act, and our new Nova Scotia climate change fund.

THE CHAIR: MLA Susan Leblanc.

SUSAN LEBLANC: I feel like I want to get in on this conversation, but I'm going to hold back and ask this question. In the deputy minister's opening remarks, you talked about geothermal, and in my colleague's first question, he talked about nuclear. Last week, the Premier stated publicly that he was considering nuclear energy as a means of decarbonizing the province. I'm just wondering where we are with that.

Is it something that the department is actively looking at, or was this a one-off comment about it? Can there be an update provided? As well, I would like to dig in a little bit in the geothermal as well because I know that there are projects going on. How many are going on? How many geothermal projects have been proposed to the department? What's happening? I know that since green energy came on the radar - or, at least, to the legislative radar - that's all we've been hearing about. I just want to know about these other - I don't want to say options - but other things.

KAREN GATIEN: I'll answer your nuclear question first. There is no active development on nuclear energy at this point. What is an option - you remember, we were speaking earlier about the inter-tie. New Brunswick is quite far along. They haven't fully developed their small modular reactor, but if they were able to do that, it might give us the potential of being able to transfer some electrons from SMRs that they produce through to Nova Scotia for our energy as well.

At this point, there is a moratorium on uranium exploration, so all of that would limit what we could do as a province at this point in terms of in-house. It doesn't mean it's ever off the table. It might be a good option that we would look at, but at this point, we're not.

In terms of geothermal, as I mentioned, there are about eight areas. They would be no surprise areas too. I'm sure they're areas where there had been mining, for the most part, so Pictou County, Cape Breton, and Springhill, of course. There may be a couple of other

areas I'm not thinking of right at the moment. I want to say Digby, but I could be wrong. Happy to share that with you though, if you wanted more information.

[2:15 p.m.]

What I do know is that some of the projects that we are aware of - we've only been formally approached by Springhill at this point, and it's to see what we could do in that area to build on work that they've already done. I think they have the rink that is heated by geothermal. It's really mostly for heat at this point. There is a campus - NSCC campus, I think they're still calling it Marconi - in Sydney. I won't rely on our Cape Bretoner here, but I think it's the one right downtown on the Esplanade there. They're being heated by geothermal. They're using geothermal heat there, so there are a lot of neat projects in different places, but at this point, it's early days.

We have our team looking at what the opportunities are there, and building on these little projects that communities have already started, and if could they be expanded - particularly in the areas where it makes sense, like Springhill and parts of Cape Breton.

SUSAN LEBLANC: I guess my follow-up is about efficiency. We know - I'm pretty sure it's still the case - that efficiency is actually the cheapest way to decarbonize. We also know that it is cost effective for homeowners or people who are ratepayers, I guess is the best way to say it. We know that it's also a significant part of the, quote, "just transition" and the skills development, but I'm not hearing - I mean, you did talk about the \$250 million. That's great, but it still feels like kind of a drop in the bucket when it comes to what could happen and the impact it could have.

I'm just wondering if with all of the conversation around green energy, is efficiency dropping off or is there a plan to keep amping up work on efficiency? I mean, the programs that we're seeing now are good, but - I talk about this all the time. I had yet another - this is my third one, folks - energy assessment a couple of months ago and was looking at all of the options of the things that we could do in our home. You know, some of them are good and some of them are not so good. Like, \$50 a window kind of not so good.

When are we going to see some real action on that as a leading force in our journey to 2030 and 2050? I know we're leaders. Totally, someone's going to see we're leaders in the country, but we could be better than that even.

KAREN GATIEN: I'll start, and then I know Lora has some comments.

It certainly hasn't dropped off. I think we are - I agree - I won't say the leaders, but we are. It is important. I think we all recognize that decarbonization is expensive; it's going to cost money. I think I've said before here that we're really focused on how we help people keep their bills manageable as everything escalates too, right? But it has to be part of it.

I think you're right. I know I've replaced windows myself. It's very expensive. We've started in areas where perhaps the biggest impact would happen. For example, in all of the 13 Mi'kmaw communities - how do we retrofit all of those homes to make them more efficient? That started before this government, I know, but it has continued on, that work, and how do we help lower income families access heat pumps. But it's not just the heat pumps - it's also the electrical panels.

I also recognize, and I think the department recognized, there are a lot of low-income families who aren't in their own homes, right? Then how do we also make more funding available for rebates and things for middle-income families? There's lots more to do, but, certainly, it remains a strong priority. Our partnership with Efficiency Nova Scotia is an important one, and we're continuing the work. It is going to take more money, for sure, and more initiatives, and we'll continue to work. You see the investments have continued to grow because of the need and how important it is as Nova Scotia decarbonizes.

LORA MACEACHERN: I'll just add a couple of comments because Karen was able to cover most of the ground. I just wanted to say that in my view, \$250 million in under two years is a large, large amount of money, so I think that we should all be really proud of the investments that are being made in that really important area.

I'll also say, as Deputy Minister Gatien had mentioned, the fact that we have a stand-alone efficiency agency here in Nova Scotia is something to be really proud of as well. They're doing great work. Many other provinces do not have that kind of stand-alone agency, and the ability that we have to partner with them and do great work is a huge benefit to Nova Scotia.

I would also add that as part of the climate plan - if you look through the plan that we've circulated - there is a whole section that is focused on energy efficiency actions. One of them is around reviewing existing energy-efficiency programs and looking for opportunities to enhance and improve them. That is part of our five-year action plan. A lot is happening on that front and will happen over the next couple of years.

THE CHAIR: MLA Ronnie LeBlanc.

RONNIE LEBLANC: My question is from the Nova Scotia Offshore Wind Roadmap. I'd like to preface my question. I don't want to give the impression that we're against offshore wind, and those fishers and fishermen organizations that I spoke to, have never indicated that they're against it either.

As part of my critic role, I've had the opportunity to speak to a lot of organizations and individuals who have raised some concerns with the document, especially around timeline. What they're saying is that the timeline is happening fast. There are not a lot of

answers to their questions. They're concerned that there is not enough time to really understand the impact on the marine environment or to have proper consultation.

There is a real concern that it's moving so fast that they're not going to have an opportunity to really sit at the table and have those discussions the way it should be. There's no question that offshore wind should play a role. It's where you put it - it depends on the impact on the fishery.

My question is: What would you say to those concerns that the fishermen and fisherwomen are raising as part of the document?

THE CHAIR: Deputy Minister Gatién.

KAREN GATIÉN: Maybe I'll start and then I'll see if Chris - that work also falls under his branch, so I'll see if he has anything to add.

I just want to say that there are two processes. There's a regional assessment that Chris referenced earlier. It's about an 18-month process, because the offshore is a joint management structure with our federal colleagues. They'll hopefully feel that they can participate in that. Certainly, part of the point is that communities and fishers, and other interested organizations - in particular, our Mi'kmaw populations - participate in giving feedback and input into that process.

At the same time, we have this Offshore Wind Roadmap. This is Phase 1. It's to help industry and the sector understand what the regulatory pathway is. But the hope is that they will be participating and engaging all the way through it. You'll notice that there's also an engagement phase in this. It's very early days. We have ambitious targets, as we've been talking about, so it does need to move fairly quickly. They will be an important partner and an important voice. We'll want to hear from them as much as possible.

Perhaps I'll let Chris speak a little bit about how that engagement might look, and at what point.

THE CHAIR: Mr. Spencer.

CHRIS SPENCER: This is obviously a very important topic. We've touched on it earlier in relation to hydrogen. It's even more important with offshore wind. We're specifically talking about people's livelihoods, and in some cases, their sole livelihood - the life force of certain communities. We do recognize that.

The message to them - their concerns are valid and very important. We want to make sure that they can effectively participate in these processes. I mentioned earlier that governments have come together, and we've empowered a sort of trusted authority, as we see it - somebody independent of government, Net Zero Atlantic - to get out there into

these local communities and build their capability and capacity to participate in these processes.

They can be very daunting. We can do the best we can to set that stage for inclusive dialogue, but we need to empower those communities. We think that through that effort, we're setting the right stage for an inclusive and very effective process.

It's a constant challenge for us. We've put out a road map because we feel we need to offer some clarity and focus to the conversation to attract people into that conversation - to make that conversation address the meaningful needs, interests, and concerns that are relevant to our approach.

If you looked at our road map, it says "Draft" on every page. It's always going to say "Draft" on every page because we call it an evergreen document. It's simply a device to focus an ongoing, evolving conversation with all stakeholders. So at the front end of the road map, we've purposely had to create further focus around the investor conversation with developers. Once again, nothing is cemented at this point in time, but we're trying to pull them in to create the set of facts so that we can all understand, what this opportunity could look like. Through that opportunity, then we can speak to other audiences through successive modules in the road map as that instrument I described - that evergreen instrument that I described - to focus and facilitate further inclusive dialogue.

The next module that we're looking at, targeting for next Spring, it's thinking about: Okay, so we've heard a little bit about this from the developers and why you're interested in Nova Scotia. What's in it for Nova Scotia? That's the next piece, and that's a real stage setter for social acceptance. There needs to be something in it for Nova Scotia, and that value prop - obviously Peter's area - that economic opportunity is great. Youth employment, certainly. There's no better emerging opportunity for Nova Scotia when it comes to our youth, but it's also about meeting our clean energy needs.

We've obviously focused a lot on some of those options, in particular the cost of carbon. This can really cut a lot of the affordability and reliability out of that equation by bringing this into the picture. There's a deliberate staging to this conversation that feels important, but nonetheless, the regional assessment has begun in a very formalized way. There is a sort of boots on the ground, everybody in this together kind of mentality when it comes to engagement, and we need to recognize that there's a lot of that. How do we coordinate it? How do we channel it in the right way?

We're trying to develop our own public engagement plan to figure out how does it all come together? The way we see it coming together ultimately is through the most important module of this: the culmination of the road map. We had to obviously think of the timing of the regional assessment. As Deputy Minister Gatien said, that's an 18-month process. It finishes in the Fall of 2024. We can't come out ahead of that with that most important module. On the heels of that, sort of in a "what we heard" vein, our own parallel

efforts, the efforts of many others, and principally what's happening with the regional assessment, we see coming together in sort of a "what we heard" Module 3 - the important culmination ahead of really going out to market with the issuance of any rights on our offshore.

We think we're offering a strong recognition of the importance of this, and we started that work, and we're going to continue it through this evergreen instrument.

RONNIE LEBLANC: Thank you for the answer. If you look at the document, it's Page 5, the starting point for offshore wind in Nova Scotia. If you go down to Nova Scotia jurisdiction, it says, "access to seabed rights suitable for the first commercial scale project(s) from as early as 2024." I guess the concern I even have - and the concern I'm hearing - is that you need to do environmental assessments, you need to do consultation, you need social licence, as you mentioned earlier, and that's essentially a year away. I speak to some people in the industry who don't really understand what's going on, so there's a lot of road ahead before even the fishermen organizations, fisheries organizations get caught up.

I guess my real concern is that it's moving so fast that that consultation - there's no time for it to adequately consult the industry, and at the end, they'll be more upset by the process than with what you're trying to achieve.

CHRIS SPENCER: Once again, valid concern. We can understand from the outside looking into this nascent area, it's hard to figure out: how does this sequencing come together? How do we ultimately end up in a place where this important new energy source, as we've approached it in that sort of sensible, responsible manner?

I need you to appreciate, first of all, what is and what isn't involved in issuing seabed rights. With the issuance of seabed rights, really all you're doing is offering a starting point for industry. You're actually empowering industry - because they will now have site control, to some extent - to invest in a lot of the activities that are related to help move us along that sensible, responsible pathway before you see any activity actually take place through that seabed right.

Some of the important things that come after that - in many ways, you can think of that initial seabed right as being conditioned on a number of future events. There are a lot of checks and balances built into that. Some jurisdictions call it a feasibility licence to underscore how early it is in terms of moving us along that pathway to actually seeing activity, and the impacts and concerns that activity triggers. Some of the important pieces of the safety net that fall into place throughout after you award that, in order to get consent - which is very important work - informed, inclusive consent. Canada has a very strong regime for that consent. The impact assessment process - obviously, the federal government has had success in this area.

[2:30 p.m.]

There are challenges in doing that right. We will learn. We think the regional assessment is a critical opportunity to better inform how we conduct an impact assessment to de-risk it, to some extent, from industry's standpoint, but to make it more effective from a stakeholder standpoint. So the regional assessment is going to identify the legitimate fact-based concerns that are relevant to how we conduct those subsequent very rigorous consenting processes. That impact assessment - that's a four-year process. We talked about the RA 18 months - one project to get that impact assessment, that's a four-year - very fact based, a lot of data, very inclusive.

Don't forget, the issuance of a seabed right in the next two to three years is just the very beginning. There are many rigorous steps along the way to protect the public interest.

KAREN GATIEN: It's more an ask or suggestion. Rather than if you have the fishery community concerned about this and having questions, please ask them to reach out rather than have them worry about it. I think Chris talked about it before. We don't want to lose hearts and minds before they have the chance to ask their questions and get information. I'd rather they reach out to me than not.

RONNIE LEBLANC: Who would be the point person if somebody did want to contact your department? Could I get that?

CHRIS SPENCER: You can give them my name, my address. We're not waiting for them to come to us. We are going to them through all the different mechanisms I've spoken to. But in a very informal, nimble, bespoke way - however we can. It's not easy, but there are existing mechanisms that we are using from our offshore petroleum era that we found very effective.

There was a Fisheries Advisory Committee under the auspices of the Canada-Nova Scotia Offshore Petroleum Board, soon to be the Canada-Nova Scotia Offshore Energy Regulator. That FAC has been a very constructive forum to gather the fishing interests together around these important areas of consideration. We've met with that FAC twice. We're using that to make sure we can do this in an effective, coordinating way.

It's a team approach. It's never going to be perfect. We'll learn as we go along, and we'll always do as best we can.

THE CHAIR: MLA Lachance.

LISA LACHANCE: I actually want to continue on around the offshore wind road map. I guess I'm wondering, while that's being developed, how does that intersect with the environmental impact assessment process.

Deputy Minister MacEachern, you mentioned you have had eight applications since January and six were wind. I'm wondering if any of them are offshore, and if we're still working on the consultative portion of the road map, how does that line up with the environmental assessment process?

LORA MACEACHERN: Thanks very much for that question. The wind projects that have come through the process so far are all onshore wind projects. Those are the other ones that I mentioned that we understand are in the offing, and that companies are feeling they're almost ready to come forward with their onshore wind projects.

When it comes to the offshore there's legislation that is before the federal House, and the consultation work and the regional assessment that's under way. As was the case for petroleum and the offshore, it was regulated by that board, so the environmental assessment approval work and the other associated regulatory functions were done at the Canada-Nova Scotia Offshore Petroleum Board, so we would anticipate that they would carry out a similar function as it relates to the environmental approvals for the offshore as well. Again, all of that is part of the process and part of what is being worked out.

KAREN GATIEN: Just to add, because it's a joint management structure, the federal government is making amendments to the accord. It's a big, long name. I could get it for you if you want it - and it won't get completed. Of course, the House has risen until the Fall, and then Nova Scotia will have to do its amendments to the provincial portion. Then the Canada-Nova Scotia Offshore Petroleum Board will change to the offshore regulator. That's when that will change.

THE CHAIR: MLA Lachance, if you finish us off with four minutes, it'll be a perfect score of six questions per caucus.

LISA LACHANCE: According to the road map, the department would like to issue leases as early as 2024. I'm just wondering: Is that still the timeline? I take the note that the road map will be evergreen, but obviously there's a certain point where there's a full product. Would any leases be issued before that is completed?

CHRIS SPENCER: Very good question. First of all, your language - we don't have any stake in this. We're completely neutral. We are approaching this as an area of important investigation in an inclusive way, so if the facts line up and the social acceptance is there, we will do what's right in the circumstances. We're not feeling that we like to, or want to, or need to necessarily, but in terms of the drivers, there are some important drivers.

One of the most important we've touched on again and again today, is meeting our own clean energy needs. 2030 is going to be upon us before long - 2035 an even heavier lift in terms of the federally imposed clean electricity standard. We need to investigate this so that it could play a viable and meaningful role in meeting that. We think that one of our

most nimble, timely areas of opportunity that we unilaterally control is looking within Nova Scotia waters.

I know we've talked about the joint management regime. The vast majority of our offshore where we have a strong, successful partnership on offshore petroleum with the federal government, we're looking to continue that for offshore wind. There are certain processes and there are certain timelines that will be suitable for that pathway. But we feel to de-risk a joint management pathway, it would be irresponsible if we were not to investigate in a fact-based, neutral way if there is an opportunity in Nova Scotia waters, defined - as Mr. Withers perhaps mischaracterized - in certain ways. We're obviously going to be very judicious in understanding the facts of whether or not there are socially acceptable areas that are near shore. We purposely don't even use the word "offshore" when we think of Nova Scotia waters. We think of that as the near-shore pathway.

What's driving that is that strong, imperative to meet our clean electricity standards to bring new options to the table that are affordable and reliable. It's an investigation that we're going to do, as I've said earlier, as inclusively as we can based on the right facts, and empowering people to learn those facts as we learned. One of those things that we're looking at is creating a working group to tackle the important policy questions about process and inclusion, so that we can ultimately make our decisions in the most confident manner in terms of social acceptance. Nobody gains if we all make a misstep, and that not only undermines our ability to bring this energy option to meeting our very timely and urgent clean-electricity needs, but ultimately poisons the well for the long-term interests in terms of economic opportunity associated with the joint-management regime.

We are going to learn along the way. That's why the approach is always evergreen. It sends a strong signal though. People should understand that nothing is ever set in stone. We are always open to pivoting based on new facts that come through that inclusive dialogue. At the end of the day, we can be confident that the steps along that path, which I've said are many steps in terms of rigorous process. Although 2024 is an initial step, there are many subsequent steps before we will feel confident that consent is there in order to see activity actually take place in the appropriate manner.

THE CHAIR: Thank you, Mr. Spencer. Unfortunately, that brings our time for questioning to a close. I think you had our attention the whole time. I'm sure time passed pretty quickly.

I'd like to give you an opportunity for brief closing remarks, if anybody would like to make some. Just give me a nod.

Seeing nothing, thank you very much. On behalf of the committee, I truly want to thank you and appreciate the knowledge that you've given us. Obviously, the topic is of interest to all Nova Scotians, but here in this committee, it was a really good meeting. I really am happy to have you here.

You're free to leave the meeting now, if you wish. We'll take a five-minute recess. Is that too long - five minutes? I see some nods from the Liberals and I'm hearing from PCs, so I'll go with that. Five minutes.

[2:42 p.m. The committee recessed.]

[2:46 p.m. The committee reconvened.]

THE CHAIR: Order, I bring the meeting back to order.

Committee business. The first piece that I have here is the Department of Fisheries and Oceans has indicated that they will not appear before the committee to discuss the safeguarding future of tidal energy in Nova Scotia. What does the committee wish to do with this? Do you want to move forward? Do you want to postpone? What would you like? MLA Smith.

KENT SMITH: It's incredibly disappointing that, number one, DFO is choosing to not join us, and that the Opposition didn't support the motion to carry on with the meeting without DFO. In light of those two disappointments, it's still a very, very important topic. I'd like to move that we continue with it in our September meeting with the same witnesses, same topic, no DFO.

THE CHAIR: We have a motion on the floor. Questions? MLA Ronnie LeBlanc.

RONNIE LEBLANC: I just want to maybe raise a point. MLA Smith mentioned that the Opposition wasn't in favour, but I'd say - it's an anonymous vote. I did vote in favour of it, so the characterization of the Opposition not in favour of it isn't completely correct.

THE CHAIR: Thank you. MLA Smith.

KENT SMITH: I appreciate that, MLA LeBlanc. Anyone non-government is Opposition, so someone on that side didn't support this very important topic in moving forward, even in light of DFO not being able to or not willing to participate.

AN HON. MEMBER: Did you see all their votes?

RONNIE LEBLANC: That's exactly the point I was trying to make - that if it's an anonymous vote, then it didn't pass. By making that statement, you're essentially saying that you all voted for it, so I had to correct the record.

THE CHAIR: I will intervene. It is an anonymous vote. We do not know who voted against it - we don't. That's a fact.

There's a motion on the floor. Do you care to repeat the motion, or are there any questions on the motion?

SUSAN LEBLANC: Could we get you to repeat the motion?

THE CHAIR: MLA Smith, can you repeat your motion?

KENT SMITH: It may not be verbatim what I said the first time, but essentially, we'd like to move that the meeting which was scheduled on the Future of Tidal Energy in Nova Scotia be reconvened and recalled for September with the same witnesses that were approved at topic selection, minus the Department of Fisheries and Oceans who are not willing to participate.

THE CHAIR: Are we ready to vote?

You heard the motion.

All those in favour? Contrary minded?

The motion is carried.

The next order of business is the letter that I believe we all have in front of us. I would like to say that this letter just came in. It is addressed to Carman Kerr. Carman, as a committee member, raised a question, and this is a response to it.

I feel that we should put this aside until Carman is with us to discuss it. (Interruption) Thank you. We'll push that to the next meeting in September.

Any further business?

LISA LACHANCE: I have a motion to bring forward. I believe that there are copies available. I think it's being circulated electronically.

We would also like to share our disappointment in the results of a recent committee poll here for an emergency meeting of this committee to discuss the closing of the Windsor causeway aboiteau. As you know, this has been ongoing for years. This has been an important issue but also a very divisive issue in the community. We have been hearing lots of ongoing concerns now from community members.

The aboiteau remains closed despite a lack of consultation with the local community and Mi'kmaw stakeholders. The minister already renewed the local state of emergency enabling this once. There's uncertainty as to what will happen when this order expires again on Thursday.

Whereas these communities have a right to participate in and understand this decision-making process, I move that this committee write to the Minister Responsible for Emergency Management and ask that answers to the following be tabled to this committee. What is the evidence of the ongoing public safety risk requiring the emergency order; the timeline of events and consultations related to this order, including conversations with local fire and municipal officials, the Mi'kmaw community, and Ottawa; and what options the department is considering for next steps.

THE CHAIR: You've heard the motion. Comments? MLA Taggart.

TOM TAGGART: First off, I'm late to get the motion. Secondly - I've said this before - I'm not anxious to pass motions that are last minute, and clearly this was designed to come to us at the last minute, because it was forwarded to the clerk, but not to the committee.

I'm just not going to support it.

LISA LACHANCE: I apologize. You did just manage to support MLA Smith's motion, which was also not forwarded to the committee and not available in advance.

AN HON. MEMBER: It was already approved as a topic.

LISA LACHANCE: You made a motion on the table.

Anyway, I think there's important information that's not being shared with the community, and this is a really important issue. We need to be able to talk to folks in that community about how these decisions are being made.

SUSAN LEBLANC: I think this is an extremely important topic. I'm not on this committee normally, but I do think this is an extremely important issue. The idea of not supporting it simply because one doesn't like to get motions at the last minute is a bit much, in my opinion.

I think we owe it to the community. Don't forget, the motion is simply writing to the minister to ask a few questions. It's not to make any grand statement or take a position. It's just to get some questions answered.

I really do hope the member will rethink his comment and support the motion to simply ask some questions.

TOM TAGGART: I will, and the reason I will is because I'm not a regular on this committee, and I'll leave that with the regulars to see where they go, so to speak.

I think it's important to note that the previous motion was to deal with a topic that was already part of this committee's agenda, and this one is kind of out of left field. But regardless, I'm filling in for another member at this time, so I will not take it any further, I guess. Best way to be safe.

JOHN A. MACDONALD: Typically, I say that about the motions. However, this actually went out before 1:00 p.m. to them.

My big concern is because, if I'm not mistaken, these questions are being asked at the courts level right now. So I have a small issue - unless I'm wrong - because there's a court asking it to be waived. I really don't want to get in the middle of asking a question that - I expect these questions are being asked in court. That's why I'm nervous doing this.

Mr. Porter has filed an injunction. I believe this is in front of the courts, and that's why I can't support this - because there is a court, and I think at least two of these questions are in his things. That's why, for my point, I can't support it.

THE CHAIR: Any further comments? MLA Lachance.

LISA LACHANCE: Just to clarify, I think at least one of these questions - perhaps you have suggestions for rewording the questions. One of them is simply facts - timeline of events and consultations. That's not something that would be interpreted through the courts. It will - that exists. I think an assessment of the public safety risk - I assume that is something that the Emergency Management Office undertakes at all times when they put an emergency measure in. The only question here I think is: What are the options that are being considered?

I still think these are relevant questions. I don't think they would interfere with the court, but I would certainly welcome amendments from the member to make them more amenable.

JOHN A. MACDONALD: Thank you, but I just got this. It was sent out before 1:00 p.m., so I'm not blaming. I don't have time to figure out how to reword it.

I should correct, since it sounded like I said minister - Mr. Darren Porter is the person who I believe has the thing. I'm pretty sure every one of these questions are in that he's looking for, and I think the court system has to deal with it. I'm not minimizing the question - I'm just not wanting to hop into anything to deal with legal - to interfere with what they're doing at the court. That's my comment, thank you.

SUSAN LEBLANC: I guess I'd just say that I really don't think these questions are anything that would interfere with a legal process. If they would interfere with a legal process, then I'd be happy for that to be the response to the questions being asked - that we

can't answer them because of a legal process. It should not prevent us from asking the questions.

Don't forget that we work on behalf of Nova Scotians all over the province, and this isn't a provincial issue. I think that it's important that we as a committee - or you as a committee - are proactively trying to get some answers about these things.

THE CHAIR: Any further questions? We know what the motion is. I don't have to repeat. Do you want to repeat it? We're running out of time, so I don't want to make you run out.

All those in favour? Contrary minded?

The motion is defeated.

No further business. The next meeting is September 26th, and it is Sustainable Marine Energy with Forests, Marine Renewables Canada, and representatives from the Department of Fisheries and Oceans Canada. You said 11:00 a.m.? Thank you.

The meeting is adjourned.

[The committee adjourned at 2:59 p.m.]