

ANNUAL  
REPORT  
2021



# AREA IN NUMBERS

MILLIONS  
**DIVIDENDS**  
PAID TO TOWNS

**6,700+**  
UTILITY CUSTOMERS

**5 YEARS**  
OF OPERATION

**\$51 MILLION**  
IN TOTAL ASSETS

**MILLIONS**  
WHOLESALE POWER SAVINGS

**10 TURBINES**  
23.5 MW

**84%**  
CLEAN ENERGY

**192,335**  
SAVED tCO<sub>2eq</sub>

**\$10+** MILLION

TOTAL BENEFIT TO TOWNS & MEUS

# ELLERSHOUSE WIND FARM

AREA has shown resiliency through the Covid-19 pandemic and continued to achieve its financial and operational budgets. The Ellershouse asset remains healthy and operationally sound. It continues to generate more electricity than originally expected. The chart below illustrates that this fiscal 2020 / 2021 continues the over-performance trend.

Fiscal Year 2020 / 2021 Production Exceeds Budget by 4.5%

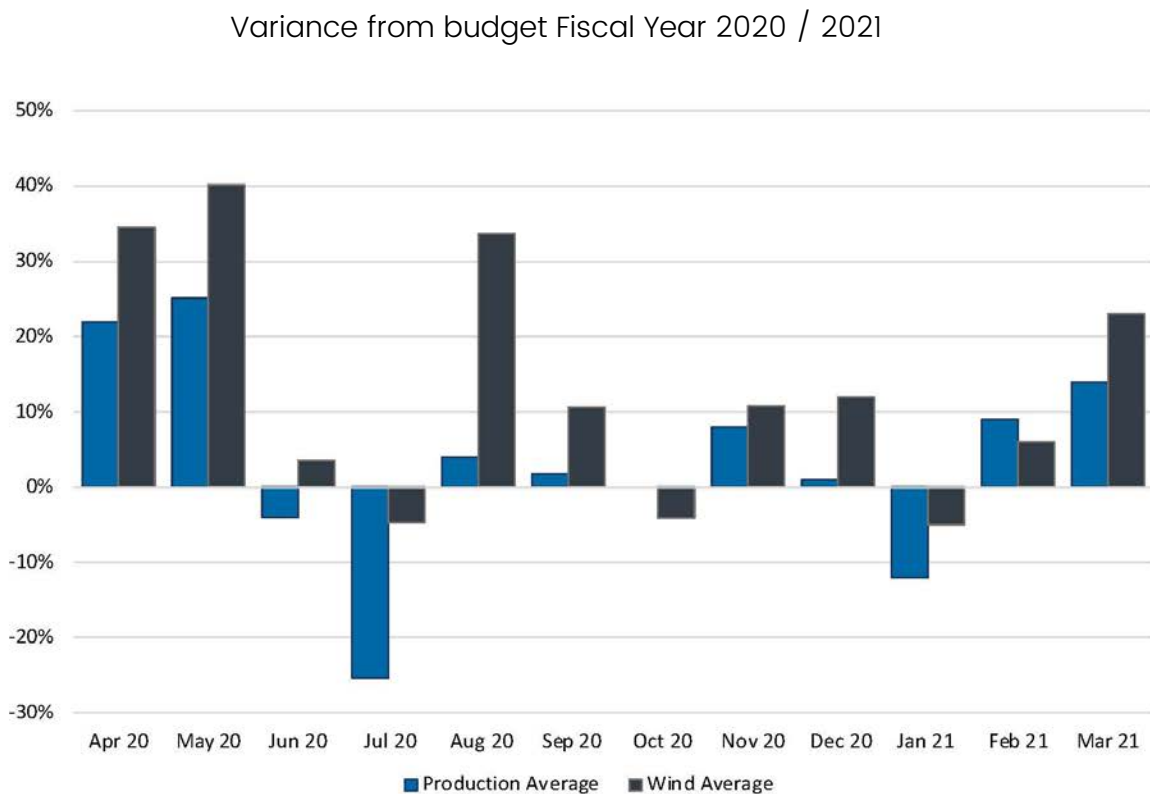


Figure 1

AREA has used the investment decision estimated annual energy generation amount as the budgeting baseline since inception. Ellershouse has consistently overperformed relative to that baseline and we are therefore making an adjustment. This change will result in a more accurate reflection of our business prospects which enables better operational decisions that will preserve the lifetime of the asset. Wind production variability mainly affects (i) the monthly quantity of top-up energy rebated to the MEUs and (ii) the monthly quantity of spill energy paid for by NSPI. Given that the wind variability is linked to top-up and spill energy costs, the budget has been based around NSPI's top-up/spill balancing point, which is revised annually and set for a calendar year.

# 2021



AREA staff believe that 2020 top-up and spill costs are the best estimates for the Fiscal 21/22 budget and the wind energy production variances are now baselined to the 2020 monthly production amounts. The April and May numbers reflect comparisons to the new baseline methodology as shown in FIGURE 2 below.

Variance from budget Fiscal Year 2021 / 2022

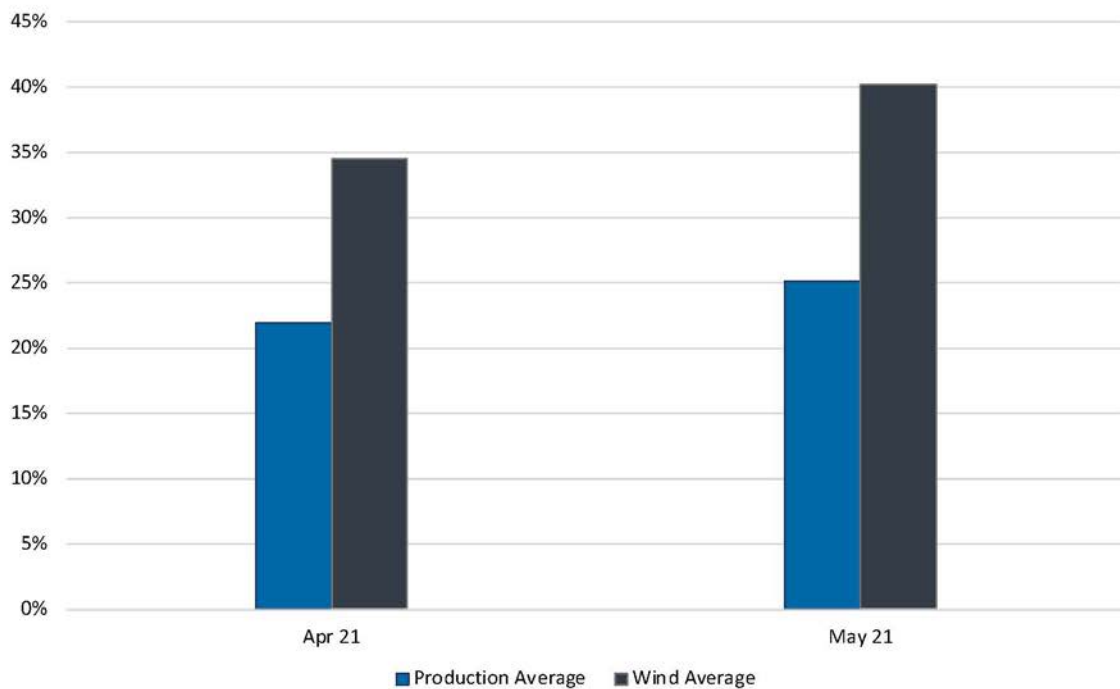


Figure 2

Enercon continues to exceed performance in the wind turbine operations and maintenance contract.

As a reminder, we hired Cormorant Utility Services via RFP to perform the comprehensive five-year substation maintenance and testing program in September 2020. We paid Strum Engineering to review the Cormorant final report, and everyone agrees that the substation remains in great shape with no foreseeable issue that will reduce its expected lifetime. AREA will be replacing the battery bank inside the substation building and other small one-off components in the substation in Fiscal 21/22.

NSPI curtails wind farm production in the province from time to time when the system usage ranges between 800MW-1000MW. Ellershouse has experienced 42 of these occurrences in Fiscal 20/21 resulting in roughly \$64,400 of delayed revenue opportunities. We consider any downtime as delayed, instead of lost, energy because the turbines have a lifetime measured in MWh, not in years. So whatever production is not realized this year will be extracted at the end of the turbine's economic lifetime. Having said that, delaying \$64,000 worth of revenue each year is a motivation for AREA staff to review energy storage concepts in Fiscal 21/22. This dynamic will grow in importance as the province adds incremental wind energy to achieve decarbonization.

# BACK UP TOP UP



Since our most recent AREA Board Q2 update in March 2021, we added NERA Economic Consulting, at the strong recommendation of McInnes Cooper, to our team of independent experts. Their addition enables AREA to best place our local expert's (Bill Marshall) evidence into the broader context of North American wholesale markets. NERA has provided an excellent rebuttal to NSPI's position that we are being subsidized by NSPI's other ratepayers. The hearing is on June 16, and those interested can watch from the NSUARB website.

The last two Board updates indicated that AREA staff were working on alternatives to NSPI's back-up and balancing services. Unfortunately, the City of Summerside has not responded to our request to discuss opportunities for us to make joint use of their dispatchable assets. We then commissioned an engineering firm to produce a cost estimate for adding 32MW of used diesel generators located at Ellershouse, confirming that such provides significant value relative to NSPI's requested increased BUTU fees. We are conducting detailed modelling of the diesel generator opportunity, but we would like to await the outcome of Provincial wind and energy storage RFPs, on which we may piggyback, before finalizing a diesel sizing business case. A significantly unfavourable UARB ruling on NSPI's BUTU requested changes would expedite further consideration of the diesel project.

We recently presented to the Minister and Deputy Minister of the NS Department of Energy & Mines and received a favourable audience on our competitive market and decarbonization initiatives. We also noted that AREA and the MEUs have spent close to \$1 million in staff and external costs defending the opening of the wholesale marketplace that delivers the significant value outlined on page 3.



# SOLAR FOR EVERYONE

AREA is developing 9MW of community solar gardens, on behalf of the Towns. This is the largest community solar initiative in the country where ratepayers can participate in the benefits of solar with their Town. Annually the community solar gardens will produce enough clean energy to power 1000 homes and will increase the total installed solar capacity in Nova Scotia by over 30%.

AREA has closed non-committal Requests for Proposals (RFPs) for both equipment and construction services to ensure we can hit the ground running when the funding is awarded.

AREA is still in discussions with vendors to take advantage of new market trends (ex. larger, more efficient modules) while mitigating procurement risks (ex. variability in steel and other commodity pricing). The results so far show that the projects can be delivered on budget compared to the financials presented previously to Town Councils and to AREA's Board of Directors.

Additionally, AREA is developing a comprehensive customer-facing strategy to market the solar gardens to customers, which has been budgeted as part of the ICIP funding application. Highlights of the marketing strategy will include:

- Direct mail brochures, pamphlets, and bill stuffers
- Deployment of Community Ambassadors - Covid-19 dependent
- One open house event per Town
- A dedicated toll-free Community Solar telephone line for customer questions and information
- Developing a website and social media accounts for the Community Solar Gardens
- Comprehensive social media marketing campaign across multiple platforms





## BUILDING A STRONGER BENCH

The continued stability in leadership and critical tasks makes our skills redundancy planning process one of the top priorities at AREA. Knowing where to build a bench lineup in the organization requires a systematic effort to ensure continuity, retain and develop intellectual and knowledge capital for the future, and encourage individual advancement. It means identifying roles and tasks critical to AREA's competitive advantage or roles specific to our industry niche and those with lengthy learning curves or reliance on experiential learning.

We have identified nineteen tasks and roles critical to AREA's stability and financial future so far, with the next step being training of staff within AREA. The objective is to create a roadmap for redundancy and a clear development and training plan where needed. The tasks and roles have been scored according to their impact on the business, and AREA staff will execute the associated training plan over the next twelve months.

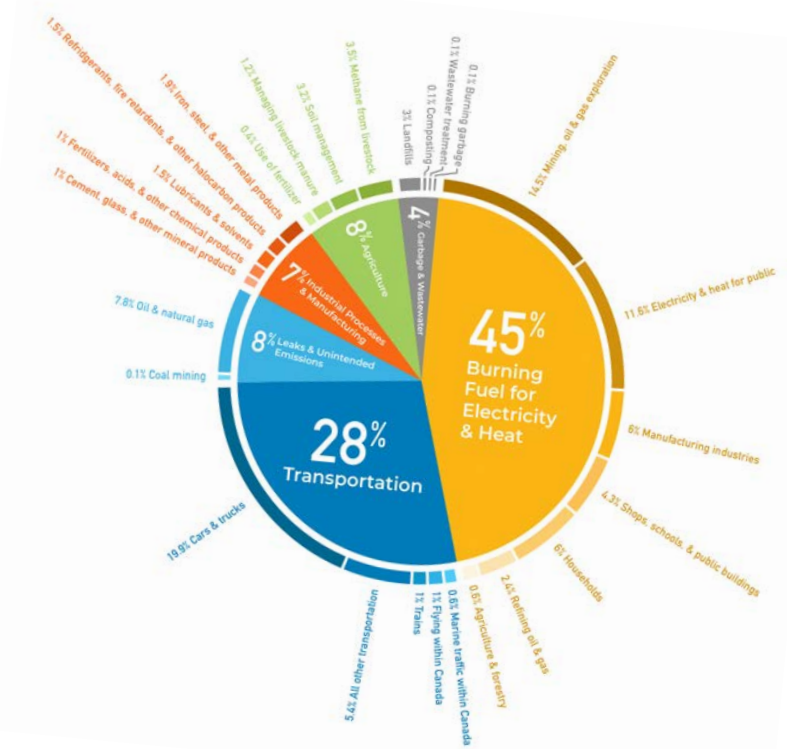
In addition to the above, AREA ran a Request For Standing Offers (RFSO) process in February 2021 that delivered interest in all three major scopes, Windfarm operations, Regulatory and Management support and Environmental Services. We identified a group of well-qualified and experienced consultants to assist in our rate design and regulatory activities, a list of suppliers positioned to help with maintenance and operational activities for Ellershouse and the MEUs and consultants to help with any Environmental services.

# ELECTRIFY EVERYTHING

Across the world, calls for climate action are getting louder and can no longer be ignored by politicians and industry. Consumers are turning towards brands and governments to deliver solutions and a path to carbon neutrality. We have an opportunity to influence the choices consumers make daily, monthly, annually or once in a while by providing sustainable alternatives.

AREA projects address both these big emitters. By far, the biggest emitters of GHG in Canada come from the combustion of fossil fuels to make energy, including heat and electricity, with the transportation sector being the second-leading source of GHGs.

With the Ellershouse Wind Farm, Solar Gardens and import activities we are cleaning up our supply. With our customer programs, we are addressing cleaner heat sources through our HOME program and cleaner transportation by building charging infrastructure.



We have seen tremendous interest in the HOME program, with 254 assessments and 41 installs completed. These activities have happened between two lock-down orders and two holiday periods.

The uncertainty created by the Covid-19 pandemic has hampered our ability to continuously promote the HOME program and delayed the installation of more units.

With the support of the Towns, AREA will resume our marketing campaign in June to make use of the opportunity that restrictions are being eased, warmer weather is on the way, and the new federal "Greener Homes Rebate Program." The HOME program Administrator will contact customers that have had an assessment done but have not moved forward with an installation directly during this campaign to motivate action and deliver further support. The HOME program now requires little AREA staff time, other than marketing efforts and no financial contributions from the Towns or AREA. We are optimistic that we will see greater uptake as the pandemic subsides.



# CHANGING OUR ROADS



The transportation sector contributes 27% of GHGs in Canada. Here, cars and trucks, including personal vehicles and commercial vehicles, share the largest slice of the pie. Electric and hybrid vehicle technologies can help lower emissions, improve air quality in our communities while also reducing noise pollution. Equally important steps would be building more bike paths, improve public transport and investing in shared mobility.

AREA and the towns have taken the important step of investing in charging infrastructure for electric vehicles. Charging units for Antigonish and Mahone Bay have been delivered, with installation plans in the making. The charging units for Berwick will be delivered by the end of June when they will also commence with installation. We plan to have all charging units operational and visible on all electric vehicle charging applications by Fall 2021.

Due to the third Covid-19 wave, planned electric vehicle test drives hosted by Next Ride were postponed. Next Ride has indicated that they are comfortable resuming test drives, and together with AREA and the towns, we will schedule new dates in the Spring and early Summer. We look forward to continuing to inform and promote the switch to electric vehicles in our communities.

The introduction of provincial incentives stacked up alongside the federal incentives is forecasted to result in a 70% increase in EV adoption in Nova Scotia, meaning we could see as many as 30,000 electric vehicles on the road by 2030.

There is a significant upside to the Towns accelerating the conversion to electric vehicles, 5 tonnes per year of annual carbon savings per EV to name but one.



## LOOKING AHEAD

AREA and the Towns have a proven track record of emissions reduction, but we need to do more. The bar for bold environmental action is getting higher, requiring us to adapt and continue to innovate.

The federal and provincial governments have made it clear that this decade will bring transformational change to the economy and energy sector. Carbon pricing will increase nationally to \$170/tCO<sub>2</sub> along with higher emissions reduction targets of 40-45% from 2005 levels by 2030. Additionally, the province announced an ambitious plan to phase out coal-fired electricity by transitioning to 80% renewable energy by 2030.

Significant new programming and funding commitments have been made along with these policy announcements. These include the federal commitment of \$1 billion towards Smart Renewables and Electrification Pathways Program (SREP), the provincial Green Choice Program, the Shared Solar Program, and more.

As these commitments have already been made, this money will go to support clean energy projects in communities across the country. AREA has a responsibility to use any channels available to provide affordable, clean energy to the Towns we serve. AREA's entrepreneurial spirit, combined with the competitive advantages of municipalities, means we can leverage these opportunities to attract investment from new programs by delivering on the climate change ambitions of the other levels of government. We need to act. These funds and programs will not be available indefinitely.

While we are ambitious and driven to do more when we can, we are fully committed to the roots of our organization and will always do the projects we started with an equal priority to our new ventures. New projects and funding can result in the following benefits for the Towns, increased regulatory certainty against NSPI, reduced costs and carbon content risks, increased dividends, and increased economic activity and job creation.

The strengthening of AREAs bench through our skills redundancy activities will allow us to refine our project development strategy for screening new opportunities and securing funding to ensure the maximum benefits are returned to the Towns. This means continuing to explore opportunities for strategic electrification, smart infrastructure investments and firm capacity, among many others.

We look forward to working on the Towns' priorities and project ideas to advance environmental and economic sustainability together.

**Acting today to preserve tomorrow**