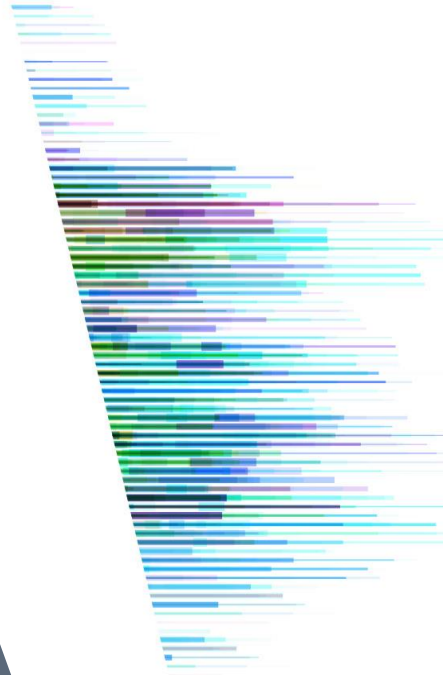


2021

# Sustainability Report



The Power Of Certainty™



## Green Underwriting Leadership



**Tom Dickson**

CEO



**Sherry Huang**

Chief Actuary and  
Managing Director of  
Underwriting Development



**Shawn Lee**

Senior Scientist

### New Energy Risk Is Underwriting a Greener Future™

Industries, companies, and leaders are devoting increasing effort to address Earth’s climate and sustainability crises. At NER, we’re inspired when we hear news of these actions, like lower emissions targets and investment in renewables projects. As a staff of “green underwriters,” we look for ways to also step up our commitment to solve global challenges. This is part of our company DNA. However, good genes alone are not enough to run an effective and impactful company. We know we must be proactive to align our work with our values.

When prospective clients come to us for our insurance solutions, we ask ourselves: Are our services and products the right fit for their needs *and* do their technologies align with our climate and sustainability goals?

NER implements a thoughtful decision-making process to evaluate the impact of prospective client technologies and businesses. This key framework has given us new focus. By standardizing our assessment and taking time to assess select cases in detail, we can say with more assurance than ever before that our commitment to improving the world is material and consistent.

In this annual report, we are pleased to share some of the climate, sustainability and environmental impacts of our client portfolio. Their innovations are breaking old patterns of wastefulness and carbon intensity while also moving society towards circular economies at scale. This year we are proud to report that the overall impact of our client portfolio as outlined later in this report has increased 48% year-to-year with some underlying impact measures increasing more than 100%.

### Opportunity Assessment and Impact

Part of NER’s unique value is our proprietary technoeconomic model, which underlies all our risk assessment. We have now taken that discipline from our insurance underwriting and are also applying it to our prospective client assessment. During that process, we discern the net socioenvironmental effects of each opportunity to assess the fit for NER against the backdrop of

our climate and sustainability values. Our client pipeline is dynamic and evolving with new technologies and business models, so we periodically review our criteria to reflect the realities of current innovations. By vetting clients whose impact aligns with our standards, and the ESG goals of our insurance partners, we enable risk transfer that can scale some of the most beneficial, innovative technologies addressing global challenges.

Our framework features the following key elements:

- Mandate - NER has a mandate to seek out and work with clients that are making a positive impact on the climate and sustainability challenges in the world.
- Quantitative and consistent - We apply quantitative socioenvironmental lifecycle analyses vs. baseline products (e.g., does a prospective client's technology have lower CO<sub>2</sub> equivalent emissions than a current baseline technology).
- Comprehensive - In addition, we extend our evaluation to include other merits and criteria as well.
- Reporting - And as before, we remain committed to reporting our cumulative client sustainability metrics on an annual basis.

Our client assessment and impact strategy is one example of how companies can recommit to their values by taking discreet and specific actions. While this strategy of analysis may be particular to our business model, we hope to inspire and collaborate with the broader insurance industry to imagine ways each company might follow suit.

## Our Insurance Partners

NER's client impacts are also important to our insurance partners who increasingly have their own climate and sustainability targets. Through our innovative insurance solutions for energy transition technologies, and through our risk analysis that considers future climate volatility, insurers working with NER can chart a pathway into rapidly growing sectors and businesses. What's more, this business generally lacks correlation with their in-force portfolios. Our curated client list provides our partners with the opportunity to be climate change mitigation frontrunners. By collaborating with NER to proactively add a climate-friendly underwriting approach to their portfolios, together we are enabling the next generation of industrial technologies.

In developing our own client sustainability assessment, we researched how our insurance partners and other industry leaders are addressing climate change. In total, we reviewed the sustainability vision and strategy of 10 major re/insurers. We discovered that climate and sustainability risks and opportunities are top of mind for all management teams, and many have moved beyond the 'awareness' stage to 'adoption' of climate and sustainability considerations in their operations, underwriting, and investment. Some common themes include:

**Sustainable Investment** – The majority have incorporated climate and sustainability considerations into their investment practices. Some have documented the portions and categories of their investment portfolios that have been "ESG screened." In addition, some of the larger (re)insurers invest in and place green bonds or transition bonds that will help build a low-carbon economy or provide for underserved communities, facilitating sustainable developments with insurance capital and assets.

**Governance, Measurement, and Strategy** – Eight in 10 have established an ESG committee with a chief ESG or sustainability officer, often reporting to the COO or CEO. Half of the 10 have aligned their strategies with the UN’s sustainable development goals and are signatories to the UN’s Environment Programme Finance Initiative – Principals for Sustainable Insurance. The large multinational insurers have invested in partnerships with third parties to track their sustainability metrics, such as CO<sub>2</sub> emissions from their own operations and those of their partners and supply chains. A few of the large insurers, such as Allianz and Zurich, have published their Task Force for Climate Related Disclosure responses and frameworks. We also observed at least one instance of ESG-related achievements directly affecting the compensation of the company’s executives.

**Proactive and Creative Programs** – During our research we came across multiple creative ESG-focused programs supported by re/insurers. Some invested in improving biodiversity and in nature-based carbon removal and community resilience (e.g., Ren Re and Trans Re), others make a commitment to purchase carbon credits from direct air capture technologies (e.g., Swiss Re and Zurich). AXA, one of NER’s key partners, has a subsidiary company called AXA Climate that provides parametric coverage for climate-related risks (e.g., flood risks and agriculture transition coverage), as well as a climate school for employees to learn the basics of environmental science and sustainable action. Markel Corporation, another of our key partners, includes Nephila Climate that is a pioneer in weather and climate-related risk products.

**Greener Underwriting** – The implementation of a proactive strategy to provide underwriting support and capital to businesses and projects that have a direct and measurable impact on climate and sustainability is at the heart of our business and plans. We plan to continue our leadership and to deepen and broaden our collaboration with insurers and reinsurers, brokers, financiers and our customers, partners and stakeholders to bring more solutions, products and services to support the financing, ownership and widespread adoption of impactful technology, businesses and projects at commercial scale.

## Trends to Watch

Globally in 2021, more than seven countries made pledges to achieve net-zero emissions. Within the business sector, 60% of Fortune 500 companies have promised similar targets, with market leaders such as Google and Microsoft aiming for 24/7 renewable energy. There is skepticism about the delayed timelines for some of these goals, and the need to do even more, however we recognize that the conversation is advancing for the better year over year. Investment funds have also shifted significantly toward innovations within climate. ESG-focused fund inflow in 2021 reached \$69 billion, bringing the total volume of sustainable assets to \$357 billion. These dollars are supporting key emerging technologies such as carbon capture, hydrogen power, and long-duration energy storage.

Within the insurance sector we are seeing movement, too. With good business reasons to act—as climate issues change the industry landscape—our peers and partners are becoming change agents, paying closer attention than ever to issues related to insurability, profitability, and regulation.

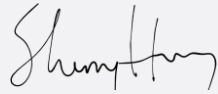
All that said, this is no time to rest on our laurels. Even if all corporate and government commitments are realized, the International Energy Agency predicts that we will likely fall short of 'net zero' by 2050 and be unable to limit the global temperature rise to 1.5 degrees Celsius.

Therefore, we firmly believe that government regulations and reporting mandates are an important part of an effective action plan. Regulations provide useful benchmarks for market participants and reporting mandates hold a mirror up to corporations under the watchful eye of consumers and shareholders. We support the recent additions of climate risk disclosure requirements from regulatory bodies and rating agencies including the US Securities and Exchange Commission, National Association of Insurance Commissioners, and AM Best.

## A Final Thought

Every year the need is greater for bold action on climate. Our company mission, to accelerate industrial technologies solving global challenges, offers us front-row seats to solutions that could only have been dreamt of by previous generations. By taking what we do best—technical diligence, commercial assessment and insurance—we are putting our skills to use in a unique way that solves a market need and addresses a global challenge. We hope that our example, whether of our prospective client assessment or of the outcomes of our clients themselves, will inspire others to act in ways small and large towards the greener future we all wish to leave as our legacies.

**Thank you for joining us on this journey to a Greener Future**



### Sources and References

<https://www.unepfi.org/psi/the-principles/>

<https://www.fsb-tcfd.org/>

<https://www.un.org/en/climatechange/net-zero-coalition>

<https://www.worldwildlife.org/publications/power-forward-4-0-a-progress-report-of-the-fortune-500-s-transition-to-a-net-zero-economy>

<https://citywireusa.com/professional-buyer/news/esg-funds-enjoy-another-record-breaking-year-winning-69bn-of-new-money/a2379110>

<https://www.capgemini.com/news/press-releases/insurers-need-to-fundamentally-change-business-models-to-achieve-climate-resiliency/>

## New Energy Risk Business

- Proprietary technoeconomic risk-evaluation of new technologies, businesses and projects
- Insurance solutions promote investor confidence and customer adoption
- Policies issued globally by one of the affiliate companies of AXA XL or Markel Corporation
- Covers commissioning, operations, or warranty backstops for 15+ years
- \$5M-\$200M+ insurance capacity per project
- We have helped our clients unlock over \$3B in capital supported by more than \$1B+ of insurance capacity

## Applicable Across Diverse Sectors

Renewable Energy



Fuel Cells



Energy Storage



Energy Efficiency



Waste to Energy



Biofuels & Chemicals



Water Treatment



Indoor Farming



Industrial Processes



Carbon Capture



Biomass Processing



Anaerobic Digesters



Petro-chemicals



Nuclear Medicine



Power Generation



Grid



Aquaculture



## Representative Client Impact

### Waste Processing

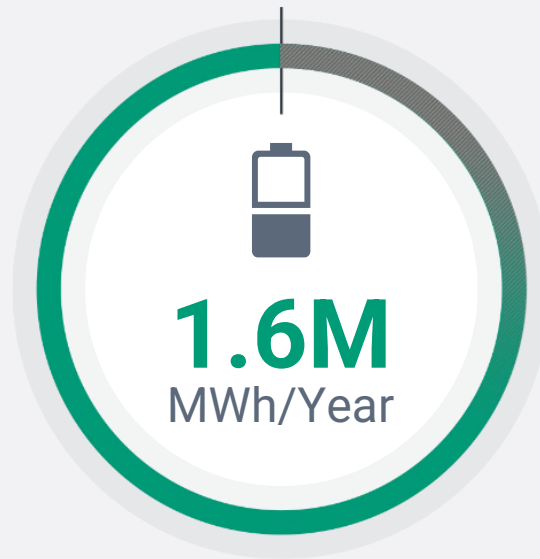


The amount of trash produced per year by **501,859 US residents**

NER clients process a wide variety of wastes as feedstocks, from mixed municipal solid waste to non-recyclable plastic films; these unconventional feedstocks set our clients apart from the incumbent recycling facilities today. This selectively helps divert some of the hardest to recycle waste from landfills, thereby having greater effective diversion capacity than a simple per capita equivalent would suggest. The companies have projected processing 449,000 tons of waste per year once they are fully operational. Future projects that depend on first-of-a-kind facilities for financing confidence will increasingly process even more otherwise unrecyclable waste.

## Representative Client Impact

### Clean Energy Generated



The amount of energy used per year by **150,331 US homes**

NER clients provide customers with more reliable, high efficiency base-load distributed energy generation assets. This increases the security of electricity against an ever-changing grid and climate, balancing out variable renewable generation. While most of these impacts are already being realized with installed and operating energy assets, NER client sites covered by our insurance solutions will generate 1.6M MWh per year of electricity when all are fully operational. This achieves a greater than 100% increase from last year's level.



## Representative Client Impact

### Alternative Fuel Produced



The amount of fuel used per year by **98,480 US drivers**

NER's alternative fuel clients provide an important, low-carbon bridge towards full electrification of the transportation sector. When operating at designed rates, NER-supported facilities will create 50M gallons per year of low-carbon alternative fuels. These fuels reduce the carbon emissions of existing ground transportation as it electrifies, as well as portions of air and marine fleets, which are electrifying at a slower pace. Some of the products produced along with fuels even sequester small amounts of carbon.

## Representative Client Impact

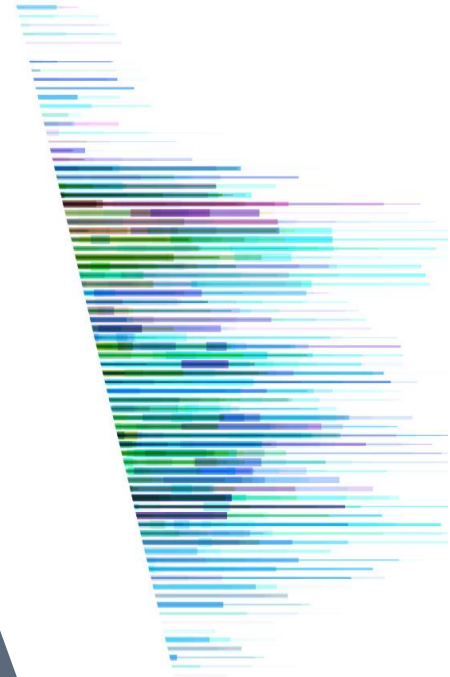
CO<sub>2</sub>e Avoided



The amount from flying roundtrip, NYC to SF, by **643,756 passengers**

Our clients will avoid emitting 473,742 tons of CO<sub>2</sub> equivalents per year from utilizing NER's insurance solutions when fully built out, assuming current baselines. This is a 48% increase from the year before and we are proud to support this increased impact. We expect this output to grow significantly in the coming years: Our technology performance insurance solutions enable access to finance for first and early commercial scale projects and low carbon technology and promote widespread customer adoption and market penetration. As our clients' innovations scale, this proves technological maturity to justify future project development financing and adoption.

Insurance policies are administered through New Energy Risk affiliate  
Complex Risk and Insurance Associates, LLC | CA License #0124307



# Contact Us

[contact@newenergyrisk.com](mailto:contact@newenergyrisk.com)

+1 (833) NEW-RISK



The Power Of Certainty™