

Stanley Oghogho Egbobawaye

# Technology Portfolio

Submitted May 2022

- ❖ **Website migration and redesign for Kanin Energy** slides 3 - 9
- ❖ **Website redesign for the Heat is Power Association** slides 10 - 14

Stanley Oghogho Egbobawaye

# Website migration from squarespace and redesign on WordPress for Kanin Energy

April 2021

# Kanin Energy Website Migration and Redesign

## About page on former squarespace website

Kanin Energy

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About

We're a development company that focuses on transforming industrial waste heat into emission-free power with no capital needed from host facilities.

Our core focus is on capturing waste heat for power generation and district heating projects. We provide a bundled solution for industrial customers that include the design, capital, construction, and operations for the project.

**Business Model: Turnkey, Emission-Free Power**

Kanin brings together technology, engineering, construction and third-party capital to turn wasted energy into revenue for our industrial partners. We build independent power plants that allow our partners to reduce carbon emissions with no capital expenditures. Industrial partners can monetize their waste heat and not worry about plant construction, financing or operations.

**Status Quo**

Industrial Facility → Waste Heat → Atmosphere

**The Kanin Approach**

Industrial Facility → Waste Heat → Organic Rankine Cycle Turbine Creates Electricity → Energy & Carbon Offset Revenues

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## About page redesign, new WordPress website

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About Us

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**Who We Are**

We're a development company that focuses on transforming industrial waste heat into emission-free power with no capital needed from host facilities.

**Our Proposition**

We provide a bundled solution for industrial customers that include the design, capital, construction, and operations for the project. Our core focus is on capturing waste heat for power generation and district heating projects.

**Our Business Model**

**Turn Key, Emission Free Power**

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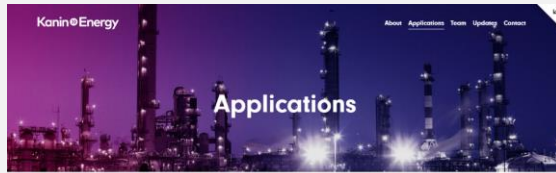
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## Kanin Energy Website Migration and Redesign



The examples below are representative projects that apply Kanin Energy's approach. The details do not match a specific project but offer an illustrative example based on real-world scenarios.

### Waste Heat to Power

#### Generating Electricity at a Natural Gas Compressor Station

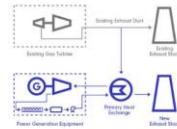
Many industrial processes vent flue gas that contains a significant amount of wasted energy that can be converted into electricity. Examples include natural gas compressor stations that move natural gas around the country.

These compressor stations use gas turbines - essentially modified internal combustion engines - that use compressor compressors to compress pressure in the pipeline. They typically burn natural gas, and more than half of the energy goes up the stack as wasted energy.

Kanin uses best-in-class Organic Rankine Cycle systems to convert some of that wasted energy into valuable, low-cost electricity. Offering a turnkey solution, Kanin brings together the expertise, equipment and capital partners required to evaluate, design the best facility for their wasted heat and generating green, low-cost power with no additional CO2 emissions.



#### Conversion Process



#### Representative Project

Turbine Model	Bulk Broya RB211
ORC Electrical Power	0.7 MW
Installed Capital	\$3 million
Cost to Heat	\$0
Revenue to Heat	\$350,000 per year
CO2 Avoided	40,500 tonnes per year

VIEW FACTS



### Combined Heat and Power

#### Generating Heat and Power at a Biomass Processing Facility

Combined Heat and Power (CHP) is an energy efficient method of generating both electricity and usable heat from a single fuel source, instead of purchasing electricity from the grid and separately burning fuel on site in a furnace or boiler. A CHP system can achieve efficiencies in excess of 75%, a significant improvement over grid power efficiency (~50% in the US). CHP is most commonly found at facilities that have a need for steady, reliable electricity and heat.

In simple cycle power production, heat is burned to either create steam, run a reciprocating engine, or run a turbine - with any exhaust gas or excess steam being vented to atmosphere. In a CHP system, a layer of heat recovery is added to that power producing step. This captured heat can be used for either space heating, cooling, hot water or industrial processes.

CHP can be set up in different ways. A CHP "topping cycle" will first use fuel to generate power, and then the residual heat from that can be used in industrial processes. An example of this would be natural gas turbine generators with exhaust heat recovery for direct use. A CHP "bottoming cycle" will first use fuel to generate usable process heat, and will capture any leftover heat to generate electricity. Here an example would be a biomass producing heat to an industrial process with an Organic Rankine Cycle engine capturing excess heat not required by the process. These different approaches allow CHP to be tailored to electricity or thermally forward industrial processes.



Kanin Energy is an experienced and innovative waste heat to power project developer, providing the expertise and resources to help our corporate partners turn their waste heat into something valuable.

### INDUSTRIES WE WORK WITH

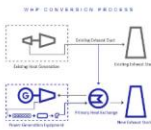


### WASTE HEAT TO POWER



#### Generating Electricity from Waste Heat

Many industrial processes vent flue gas that contains a significant amount of wasted energy that can be converted into electricity. Kanin uses best-in-class Organic Rankine Cycle systems to convert some of that wasted energy into valuable, low-cost electricity. Offering a turnkey solution, Kanin brings together the expertise, equipment and capital partners required to evaluate, design the best facility for their wasted heat and generating green, low-cost power with no additional CO2 emissions. Since these systems are turn-key they can be modified to work with sensitive fuels or high pressure conditions at scale, including hydrogen.



Kanin is technology agnostic, focusing primarily on the deployment of ORC best-in-class Organic Rankine Cycle (ORC) systems to convert some of that wasted energy into valuable, low-cost electricity. ORC utilizes the most long systems using an organic fluid that heats up to drive a turbine. Offering a turnkey solution, Kanin brings together the expertise, equipment and capital partners required to evaluate, design the best facility for their wasted heat and generating green, low-cost power with no additional CO2 emissions. Since these systems are turn-key they can be modified to work with sensitive fuels or high pressure conditions at scale, including hydrogen.

#### Sample Project Highlights

Turbine Model	Bulk Broya RB211
ORC Electrical Power	0.7 MW
Cost to Heat	\$0
Revenue to Heat	\$350,000 per year
CO2 Avoided	40,500 tonnes per year



VIEW FACTS

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# Kanin Energy Website migration and Redesign

## Post page on former squarespace website

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Nov 26

### Panelist for the Enbridge Research in Action Seminar Series



ENBRIDGE RESEARCH IN ACTION WEBINAR  
**Insights on Financing Sustainable Projects**  
UNIVERSITY OF CALGARY  
HASKAYNE SCHOOL OF BUSINESS

Join us on December 8th for the [Enbridge Research in Action Seminar Series](#)! Register below to hear from our CEO Janice Tran, along with fellow expert panelists Dan Balaban, Curtis Probst, and Nick Blitterswyk on the panel for Insights on Financing Sustainable Projects. The panel will explore business opportunities on the demand side of the energy system, increasing the resiliency of energy infrastructure, and opportunities for the Alberta workforce.

[Explore Enbridge Research in Action Seminar Series](#)

Selected to Join the Inaugural Cohort 417 for Third Derivative      Participant in the Greentown Labs ClimateTech Summit

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## Kanin Energy Presenting at Decarb Connect 2022

February 4, 2022

[f](#) [t](#) [m](#)



ENERGY & INDUSTRIAL LEADERS KICK-START DECARBONIZATION  
Read Tech Innovation | Fine tune business models | Identify partners  
29-31 MARCH 2022      HOUSTON, TX, USA  
BOOK BY 11:59PM TO SAVE UP TO \$1000

JANICE TRAN  
CEO & CO-FOUNDER  
KANIN ENERGY

ADAM RAUWERDINK  
VP BUSINESS DEVELOPMENT  
ROSTON METAL

JANIS KUBIUSZKIEWICZ  
DIRECTOR OF CLEAN ENERGY  
LSB INDUSTRIES

DECARBCONNECT.COM/EVENTS/DECARBCONNECT-HOUSTON-2022

Kanin Energy's team is presenting on carbon management strategies at Decarb Connect North America this March 29<sup>th</sup> to 31<sup>st</sup> in Houston, Texas.

This second annual event convenes in-person to play host to sustainability, energy transition and decarbonisation executives from the leading American and Canadian manufacturers within hard-to-abate sectors. Join 3 days of open and engaging discussions on the need for carbon emission reduction and the roadmap to net zero. Discussions include industry showcases, renewable hydrogen as well as collaboration and partnerships.

Register, [here](#)

About Decarb Connect: Focuses on hard to abate sectors including cement, steel, O&G, power & utilities, ceramics, and more. The events and reports support those leading the deployment of decarbonisation plans including heads of corporate strategy, CTOs, Innovation/R&D, project directors & heads of carbon management. Decarb Connect works with industry to set an annual agenda for essential research, benchmarking data, live events, retreats and more. Technologies that establish high-performing collaborations, initiate pilots or work out how to scale innovative projects - each element of our offering helps you solve the systemic and technical barriers to decarbonisation.

Sharing is Caring

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### Subscribe To Our Mailing List

Sign up and be among the first to get updates on Kanin Energy and the Waste Heat to Power Industry

Email

By clicking sign up, you agree to our [Terms of Use](#).

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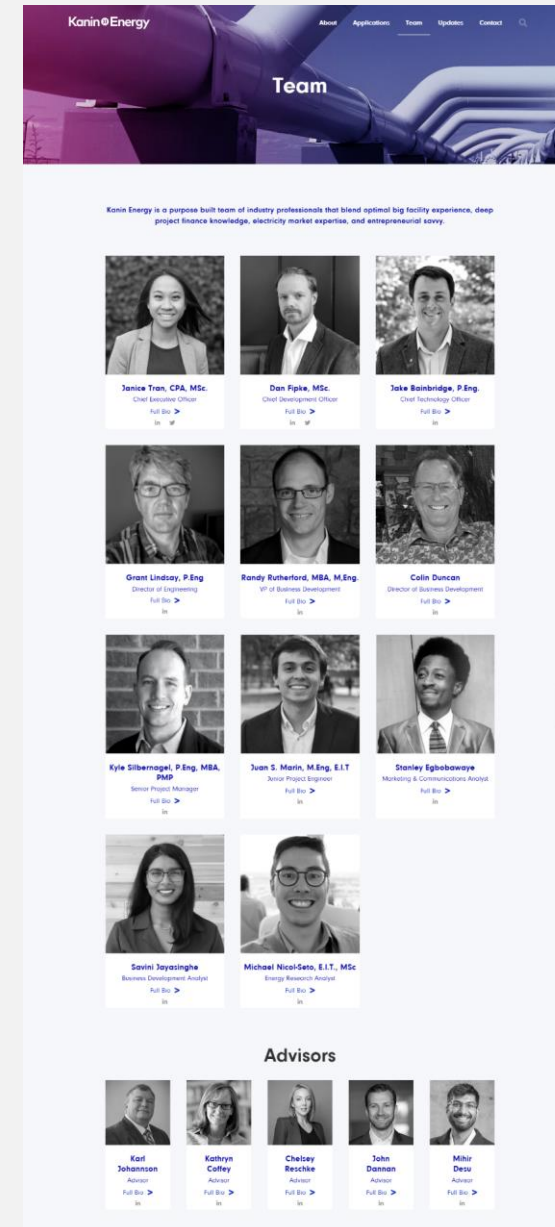
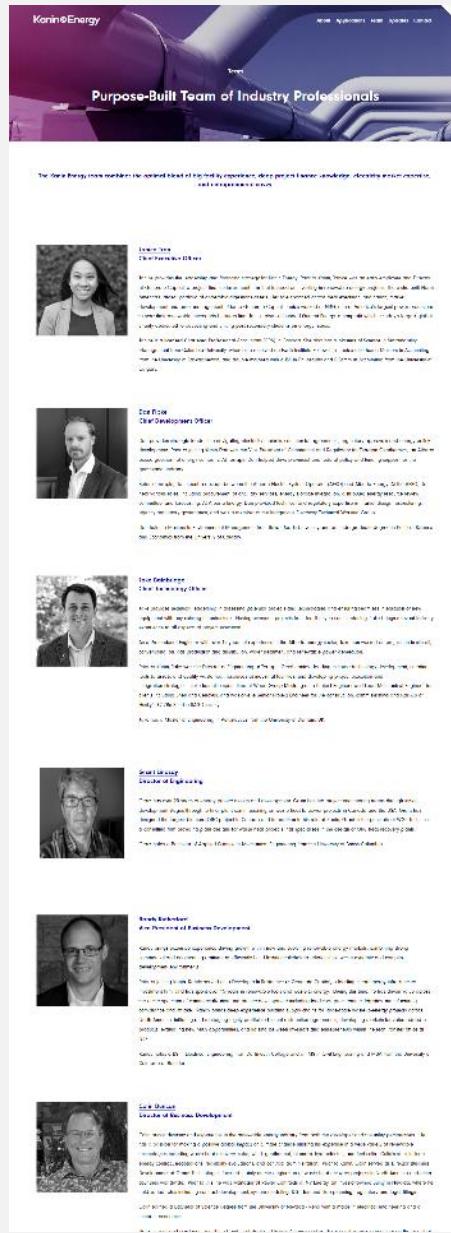
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# Team page on former squarespace website

# Team page redesign, new WordPress website

## Kanin Energy Website Migration and Redesign




<https://kaninenergy.com/team/>

## On-click page, bio popup display on new WordPress website

### Kanin Energy Website migration and Redesign



**Kanin Energy** ✕




**Janice Tran, CPA, MSc.**  
Chief Executive Officer

Janice provides the leadership and financing strategy for Kanin Energy. Prior to Kanin, Janice was an early employee and Director at Generate Capital, a project finance investment firm that focused on investing in renewable energy projects. There she built North America's largest portfolio of anaerobic digestions assets. Her role spanned across deal execution, origination, market development and asset management. Prior to Generate Capital, Janice worked at NRG, one of America's largest power producers, to start their renewable microgrids business line. Janice also co-founded Student Energy, a nonprofit which is today's largest global charity dedicated to educating and uniting post-secondary students on energy issues.

Janice is a licensed Chartered Professional Accountant (CPA) in Canada. She also has a Masters of Science in Sustainability Management from Columbia University in New York, where she received an Earth Institute Fellowship. Janice also has a Masters in Accounting from the University of Saskatchewan, and double majored with a BA in Philosophy and BComm in Accounting from the University of Calgary.

Janice on  

**Kanin Energy** ✕




**Jake Bainbridge, P.Eng.**  
Chief Technology Officer

Jake provides technical leadership in assessing potential projects and technologies and ensuring seamless integration of new equipment with any existing infrastructure. Having overseen projects from feasibility to commissioning, Jake brings relevant industry experience to all aspects of project execution.

As a Professional Engineer with over 12 years of experience in the energy sector, Jake has worked on projects in in-situ oil, conventional oil, gas production and distribution, water treatment and renewable power generation.

Prior to Kanin, Jake was the Director of Engineering at Terrapin Geothermics - leading in-house research and development into a novel ultra-low temperature Stirling engine, creating tools to assess and qualify waste heat resources at industrial facilities, and developing project execution and integration strategies. Jake has also spent time at Wood Group Mustang as a Project Engineer and Lead Mechanical Engineer for clients including Shell and Cenovus, and was on-site Senior Project Engineer for the construction, commissioning and start-up of Husky's \$2.7Bn Sunrise SAGD facility.

Jake has a Master of Engineering in Aeronautics from the University of Durham, UK.

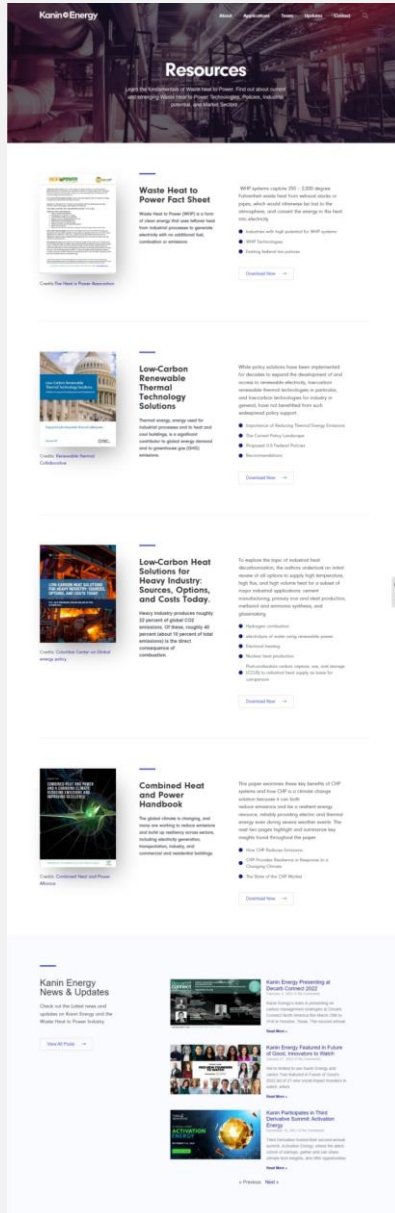
Jake on LinkedIn 

<https://kaninenergy.com/team/>



# New resource page created on WordPress website

## Kanin Energy Website migration and Redesign



<https://kaninenergy.com/resources/>

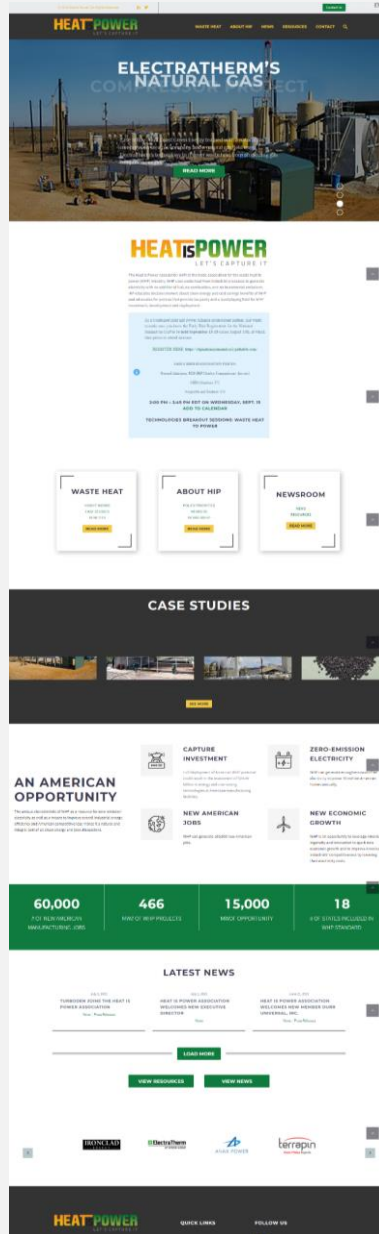
Stanley Oghogho Egbobawaye

# Website redesign for the Heat is Power Association (HiP)

August 2021

# Home page on former WordPress website

## Heat is Power Association Website redesign

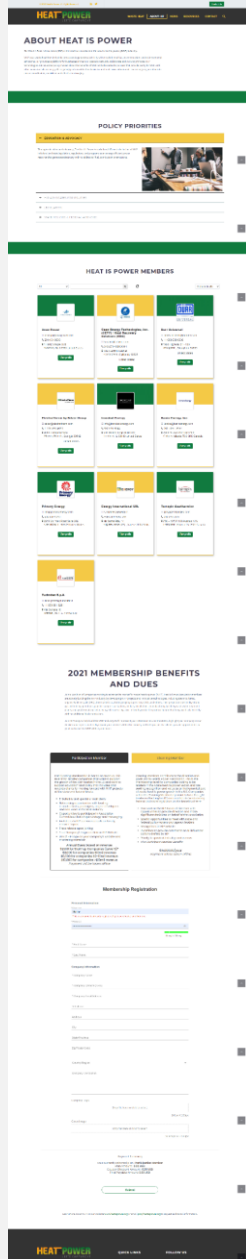


# Home page redesign, new WordPress website



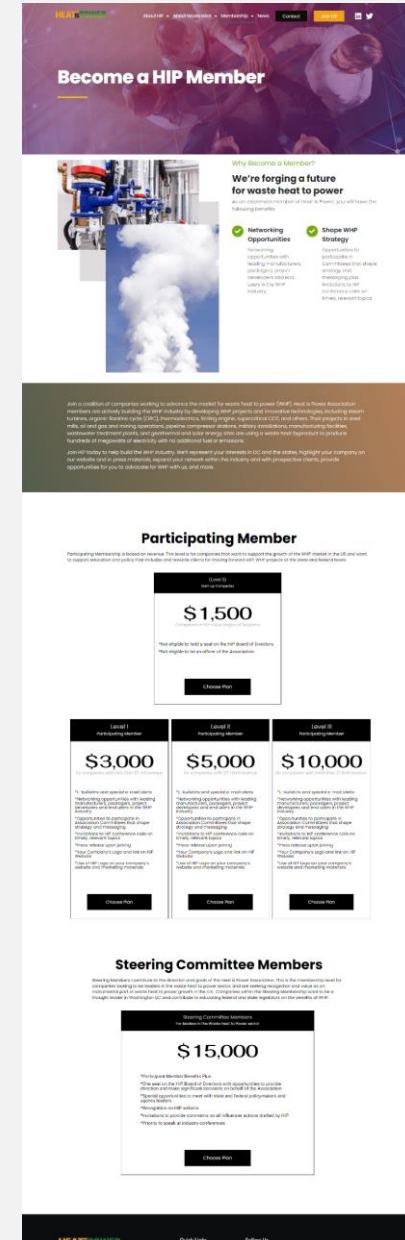
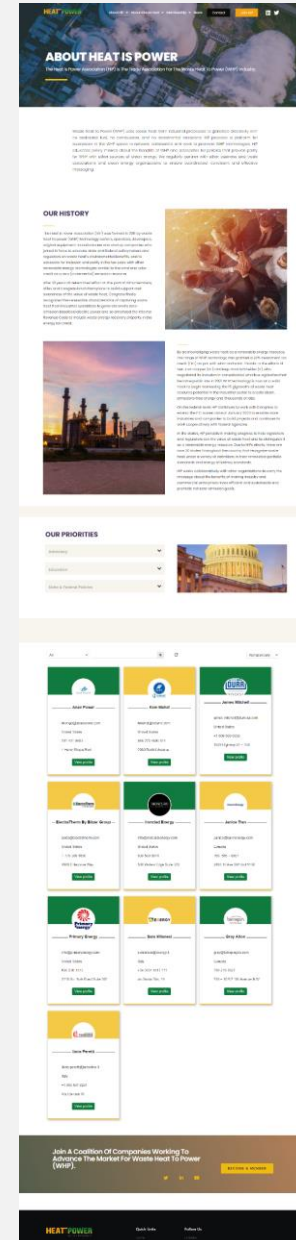
<https://heatispower.org>

# About & registration page on old website



Heat is Power Association Website migration and Redesign

# <https://www.heatpower.org/about-hip/>

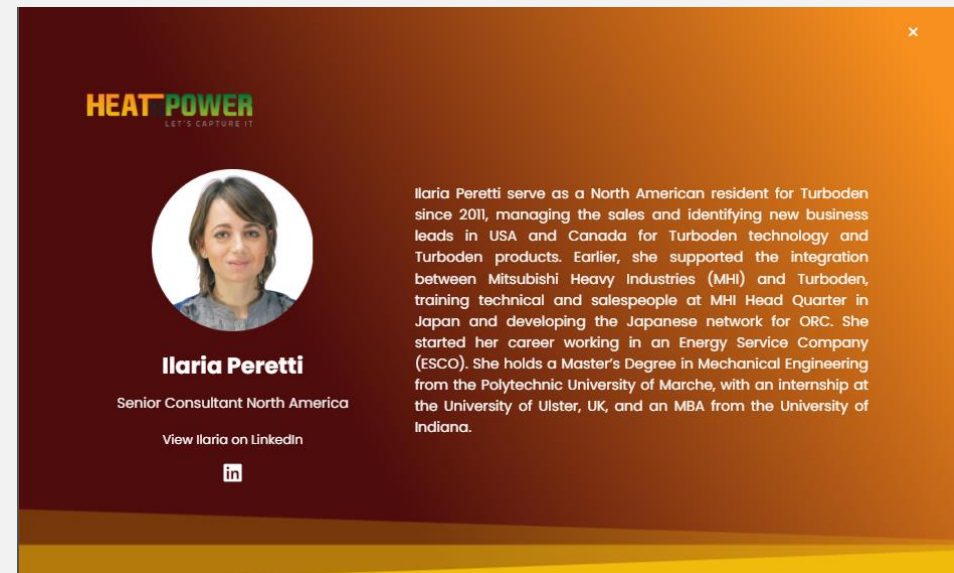
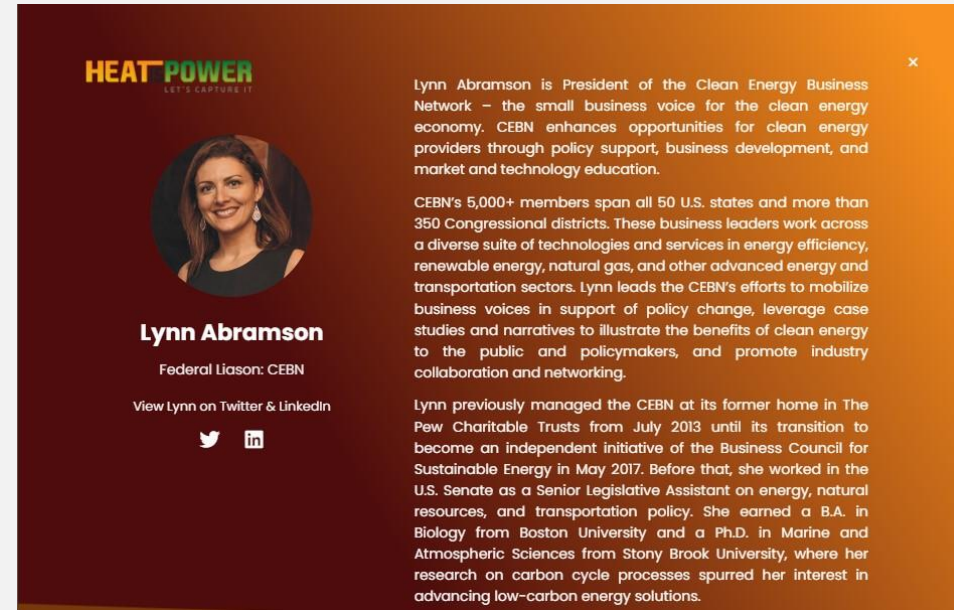
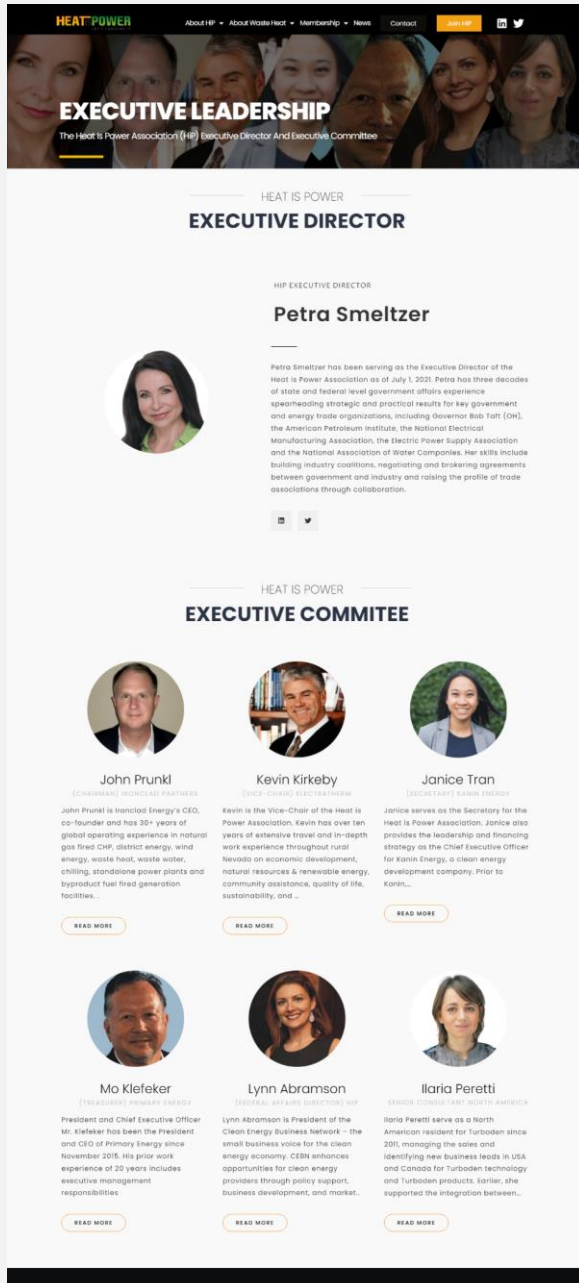


About & registration , new website

# <https://www.heatpower.org/join-heat-is-power/>

# New leadership page on website redesign

## Heat is Power Association Website migration and Redesign



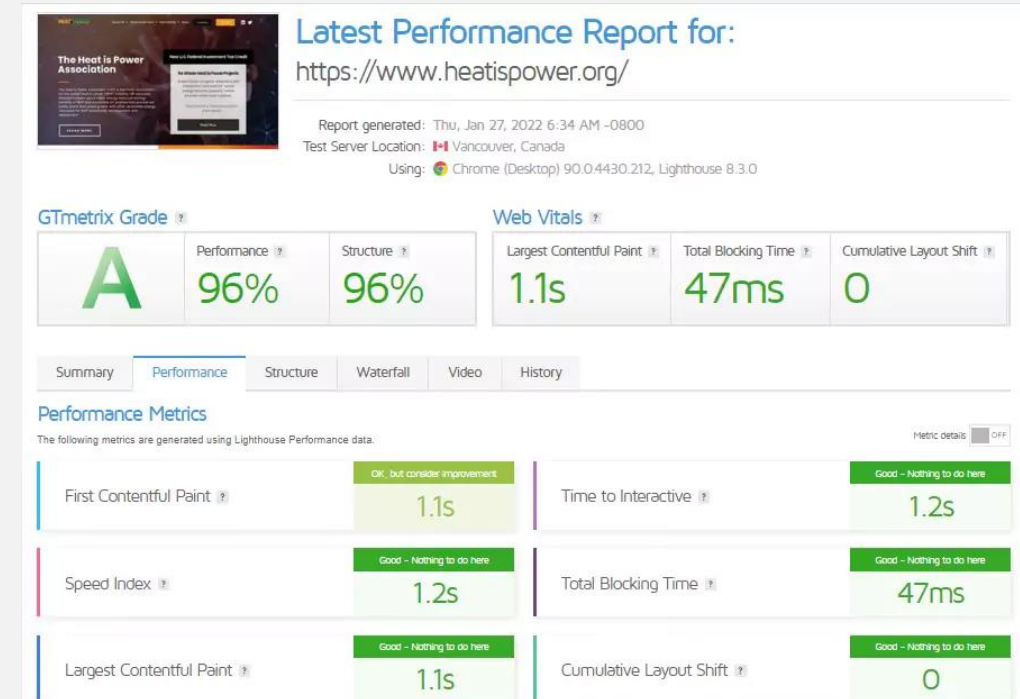
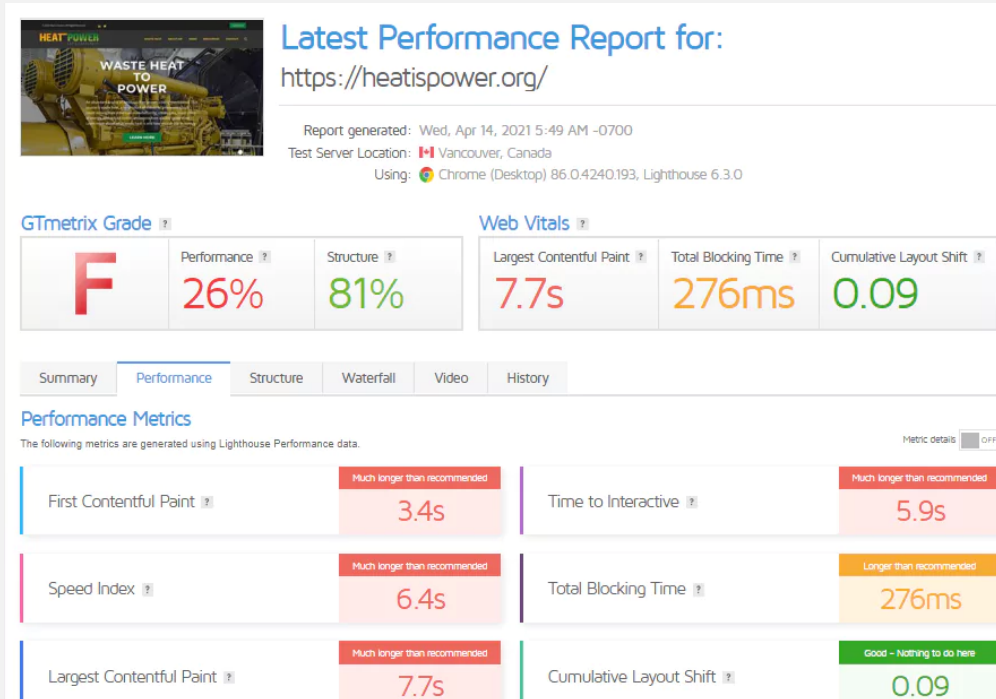
On clicking on “read more”, each team member profile pops up.

<https://www.heatispower.org/team/>

## Performance of old website

## Performance of redesigned and optimized website

### Heat is Power Association Website redesign performance



<https://heatispower.org>

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**Thank you**