PROFICY® FOR SUSTAINABILITY INSIGHTS

GE VERNOVA

Operationalize your industrial sustainability goals to help reduce costs, mitigate risk & improve resilience

Drive operations visibility & AI-based optimization, yielding savings & measurable progress on your sustainability goals

Struggling to demonstrate measurable progress toward your industrial sustainability goals while navigating operations and business demands?

You can help decrease operating costs and waste by linking plant-floor actions to your enterprise sustainability initiatives with Proficy for Sustainability Insights from GE Vernova.

Proven around the world, Proficy software is designed to benchmark, explain, and optimize utilities and resource streams used in industrial facilities. The software helps deliver visibility into sustainability progress with persona-based dashboards and leverages IoT-fueled analytics to optimize processes and equipment.

By integrating your operational and sustainability data, Proficy can help use resources more efficiently and effectively – whether you have one plant or hundreds – and manage climate metrics required for regulatory compliance. Help improve resilience and savings by operationalizing KPIs across the plant and enterprise with the visibility, benchmarks, and actionable insights to improve both sustainability and profitability at the same time.

OUTCOMES BY DESIGN

- Decrease energy and other utility costs by modeling and optimizing usage in the context of daily operations events and priorities
- Improve resource efficiency across the enterprise, enabling automatic adjustments and identifying best practices
- Detect previously unrecognized patterns, variability in consumption, unnecessary usage, and other sources of wasted energy or utilities consumption
- Accelerate the right response to problems with persona-based dashboards and triggered alerts
- Increase effectiveness of troubleshooting and continuous improvement with visibility into the most impactful and practical levers to affect change
- Advance both your industrial sustainability and operations goals by providing the right information to the right people for action and progress

01 Help decrease costs by optimizing resource usage in production context

Proficy for Sustainability Insights is designed to monitor consumption of electricity, natural gas, water, steam, and other utilities used in plants — helping teams detect problems and intervene quickly. Combining consumption and operations data can provide the context to help optimize costs, usage, and sustainability metrics together.

Analytics can help continuously detect excess or unnecessary usage, variability, and other waste that otherwise go unnoticed.

Furthermore, you can calculate benchmarks for each unique configuration of process, product SKU, and plant to understand current performance relative to expected consumption rates or best demonstrated performance.

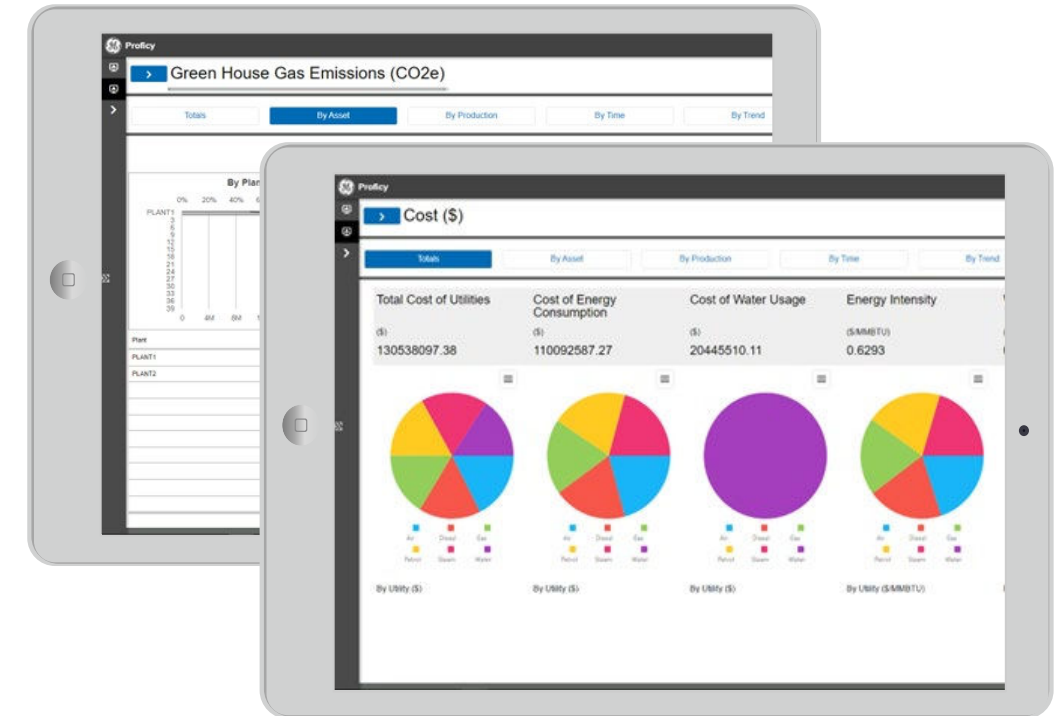### 02 Better enable continuous improvement with dashboards, alerts & corrective action

The software is designed to model performance relative to plant floor circumstances and events to help you identify the most impactful improvement levers. You can visualize and collaborate using persona-based dashboards for faster, more targeted troubleshooting. Also, receive alerts to help drive corrective action when deviations arise or when usage exceeds targets or expected consumption rates.

With Proficy, operations leaders, frontline managers, and operators can improve visibility into key drivers affecting performance. You can Pareto sources of resource consumption or carbon emissions by operational contexts such as product SKU, production team, time, or across facilities, lines/areas, and regions.

03 Optimize utilization and drive low-carbon production with data-driven insights

Use Proficy to help you move from reporting and monitoring to the right actions for improvement by configuring and deploying simple control rules or advanced optimizers to maximize resource efficiency.

The software is also designed to help you lower peaks in usage and cut wasted consumption by automatically adjusting control setpoints, recommending changes, or refining the sequence of process start-ups. Find hidden opportunities such as switching off unnecessary equipment and optimizing the balance of support equipment including boilers, heat pumps, air compressors, and more.

04 Identify and act on co-benefits supporting both sustainability and profitability

Aligning operations and sustainability teams to overcome silos, Proficy can help you integrate and manage sustainability performance and production KPIs together, producing more holistic optimizations and creating visibility to tradeoffs and co-benefits that can reduce environmental impacts and costs. By translating the impact of day-to-day activities to Scope 1 and Scope 2 carbon emissions, water usage, or energy efficiency, manufacturers can begin to manage these as KPIs – just like quality, productivity, and throughput. Operations leaders can have insights for decision-making and planning, while operators and frontline leaders can manage priorities amid changing operating conditions.

"Context is crucial to identifying the highest impact actions to meet environmental targets while respecting operational constraints. With these new solutions, GE aims to help optimize both production and environmental metrics simultaneously. We see how this creates pathways for manufacturers to operationalize sustainability strategies on the shop floor."

Julie Fraser, VP of Research for Operations and Manufacturing Tech-Clarity, Inc.

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Data Logging

- Capture near real-time and historical data, logging meter / sensor values for nearly any utility source
- Integrate OT data from existing SCADA, MES, Historian, and/or ERP systems (optional)
- Import and backfill historical data

Monitor & Benchmark

- Calculate KPIs such as Scope 1 or Scope 2 carbon emissions by plant, section, area, line, production unit, asset, equipment, and meter
- Query energy and water consumption or carbon emissions metrics at any model level for any time period
- Pre-defined queries to assess performance for current and prior shifts, days, weeks, months, quarters, and years
- Calculate benchmarks based on historical performance for each unique combination of facility, section / line / area, product SKU, and production mode
- Model expected maximum and expected minimum consumption values, and best demonstrated performance for each usage source

Persona-Based Performance Dashboards

- Quickly assess total usage by any energy type consumed, by greenhouse gas emissions (Scope 1 and Scope 2), or by water used
- Measure resource intensity per unit of product made for each utility type and for Scope 1 and Scope 2 greenhouse gas emissions
- Measure utilities cost intensity per unit of energy consumed, volume water used, or ton CO2 equivalent emitted
- Pareto usage or emissions across various contexts: facilities, line/area, asset, meter, SKU, team, shift, hour, etc.
- Analyze trends of meter values over time
- Compare meter values in different production modes (shutdown, production, idle, etc.)

Correlate Production Data

- Correlate historian tags (if integrated) to each meter's usage rates
- Identify the top factors driving abnormality when any alert is triggered to aid troubleshooting

Process Optimization

- Deploy simple control rules or advanced optimizers that recommend changes or automatically adjust machine setpoints to minimize usage
- Flatten consumption peaks or determine optimal start-up sequencing
- Decrease resource waste: Highlight performance variability and sources, identify instances of consumption during non-production periods, or when unneeded equipment is running

Drive Action

- Generate alerts to notify personnel when a meter exceeds expected thresholds using analytics running continuously in the background
- Assign actions to specific personnel for each alert triggered to facilitate troubleshooting on-shift and/or pass information to the next shift for continued investigation

Please consult online Getting Started Guide product documentation for hardware and software requirements. Confirm standard vs optional features with your GE Vernova sales representative. Specifications are subject to change without notice. Results and functionality vary, depending on existing hardware/software, applications, implementation, and other factors.

PROBLEMS WORTH SOLVING

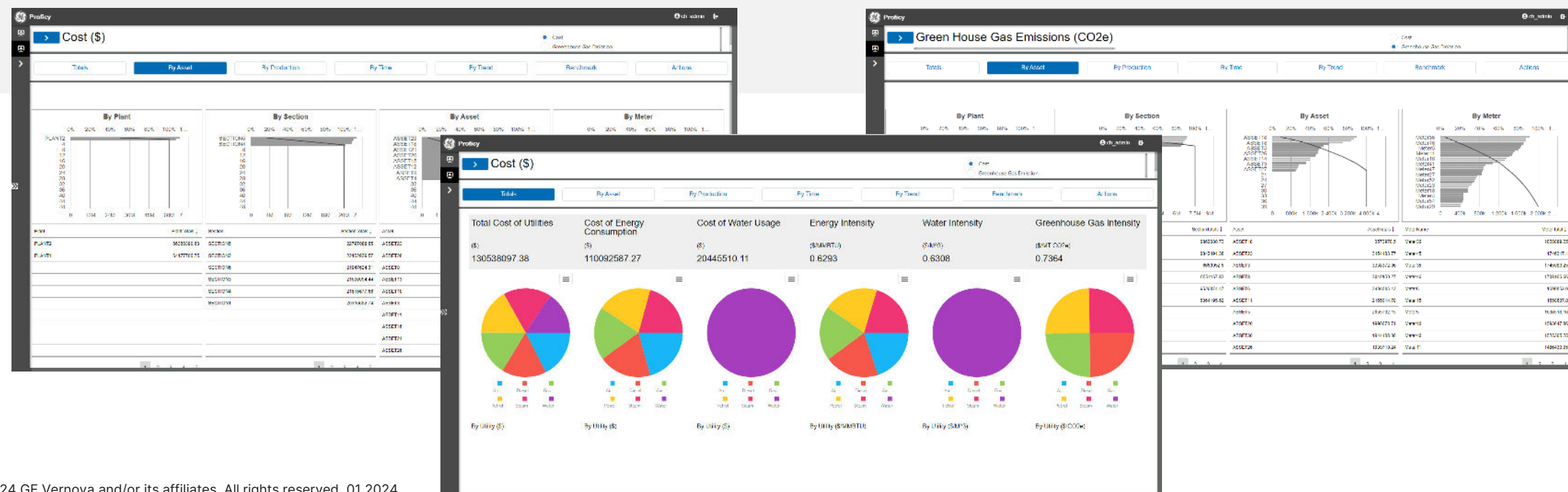*Provide process context needed to optimize resource utilization*

- Gain visibility into the most impactful levers
- Attribute resource usage to products, assets, and events
- Assess current performance against best demonstrated performance, considering specific process circumstances

Increase collaboration between Operations & Sustainability teams

- Link sustainability metrics required by regulation to Ops performance management processes
- Manage sustainability KPIs with the same rigor and routine as Quality and OEE
- Optimize plants holistically, considering operations and sustainability performance

Operationalize your industrial sustainability goals

- Unlock daily management of Carbon Neutrality glidepaths
- Provide the data quality and resolution needed to act and demonstrate progress
- Gain plant-floor traceability on metrics such as Scope 1 and 2 emissions, water usage, etc.

LEARN MORE ABOUT PROFICY FOR SUSTAINABILITY INSIGHTS

READ SUSTAINABILITY BLOGS

WATCH SUSTAINABILITY WEBINAR