

EnTL, Build an Innovative Energy Frameworks



EnTL

EnTL is a composite word that combines Energy and Korean word “Tteul” that it targets for providing the frameworks of diverse planning and introduction of technology for optimal energy consumption system of customers.

For accomplishing such a goal, systematic and accurate technology service is planned and carried out for energy consulting, cost savings and ESG management ranging from structuring strategic facility efficiency consulting, facility control and energy monitoring system (EMS) to strategic consulting on emission trading.

EnFra
(Energy Infra)



Outline

ICT-based system structuring service to materialize efficient energy use

Systematic monitoring of energy service characteristics of facility
Based on understanding of energy flow for business, the factors of inefficient use is discovered to improve
Based on diversified energy analysis infra, this is the solution to seek for corporate carbon neutrality and green growth

Solution

Providing 5 detailed services for improving the energy efficiency



Structuring the EMS based on facility/processing analysis


Relieving the corporate investment burden for introducing highly efficient equipment system

Saving power cost and additional income through efficient energy use

Saving power costs through auto control/management of maximum power demand

Energy efficiency optimization through analysis of energy use structure and estimation

EnPlan
(Energy Plan)



Outline

Planned consulting service for long-term and short-term efficient energy use and utilization

Reasonable planning for energy use following the response to climate change and environment change and securing the sustainable competitiveness for business

Solution

Structuring of climate change responding strategy and its foundation



Establishment and performance of effective responsive strategy of domestic and overseas industrial environment regulation

Study on investment/improvement strategy optimized for energy efficiency in plant facility/processing

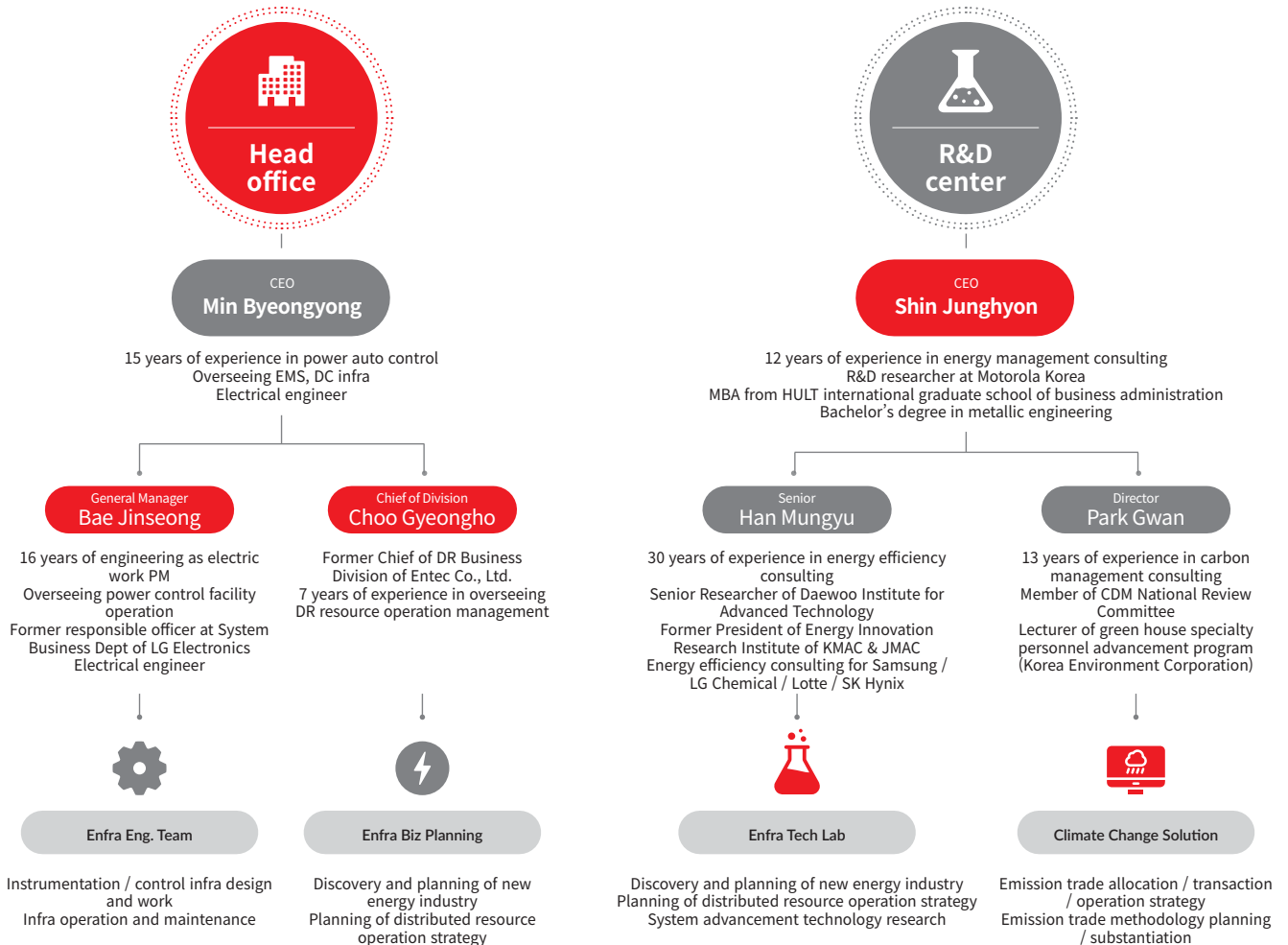
Structuring, operation and trading service for recycled energy (solar energy) generation system

History

- 2021 ● Entering into agency contract for DR/solar energy lease business with ENlighten Co., Ltd.
Acquired electricity work license
- 2020 ● Acquired and merged Pao System, changed the company name to EnTL Co., Ltd.
Moved head office (Daegu)
Registered as a venture enterprise
Awarded for grand prize in outstanding patent of Korea in 2020 by Hankook Daily
- 2019 ● Registered as a smart plant supplying enterprise
- 2018 ● Moved head office (Pangyo)
- 2017 ● Recruited and operated for DR support of Gridwiz, Inc. and entered into the agency contract
- 2016 ● Reported as a software business enterprise
Entered into joint development and supply partnership with MIPU of Italy
- 2015 ● Founded Ganeum Consulting Co., Ltd.



Organization



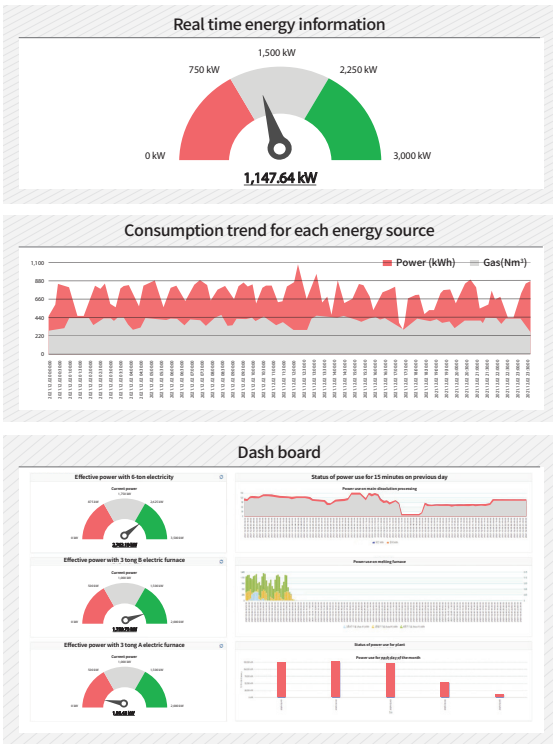
EnFra

EMS (Energy Management System)

For preparing the enterprise energy management system, structuring instrumentation / control / FEMS appropriate to the business characteristics

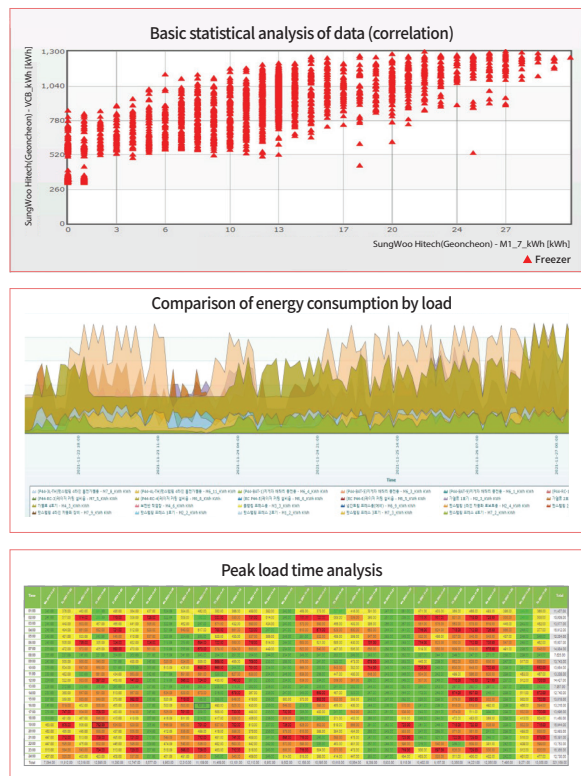
Main services

- 1 Structuring instrumentation / monitoring / analysis system

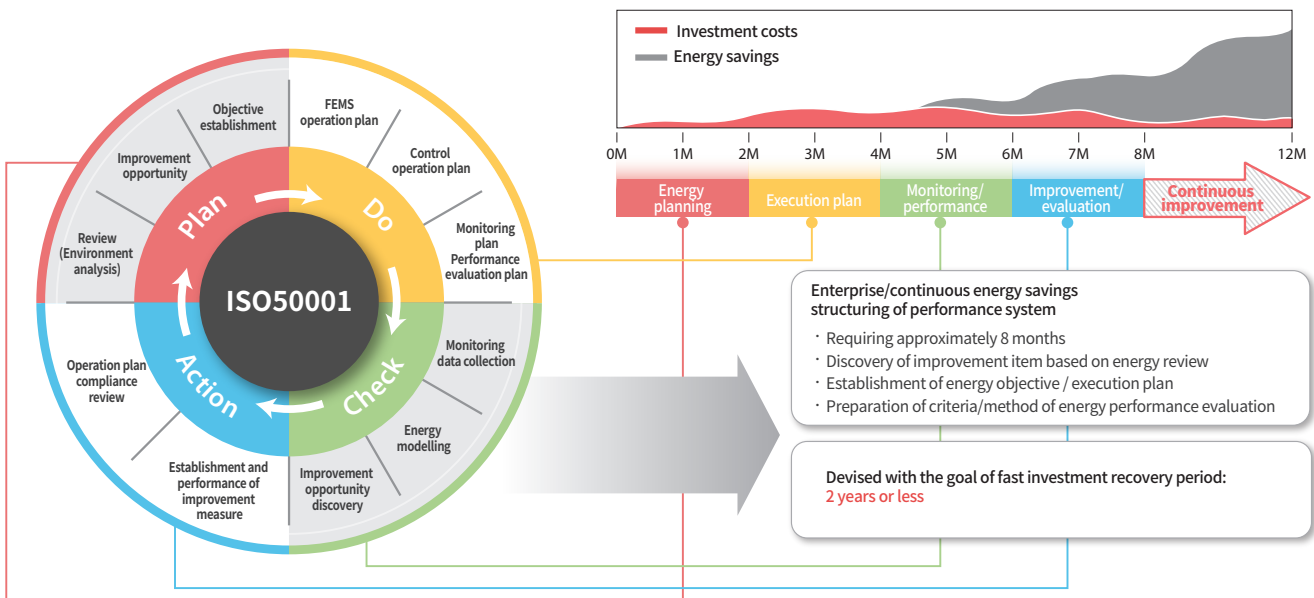


Expected effect and cases

- 1 Preparation of basis to facilitate energy data

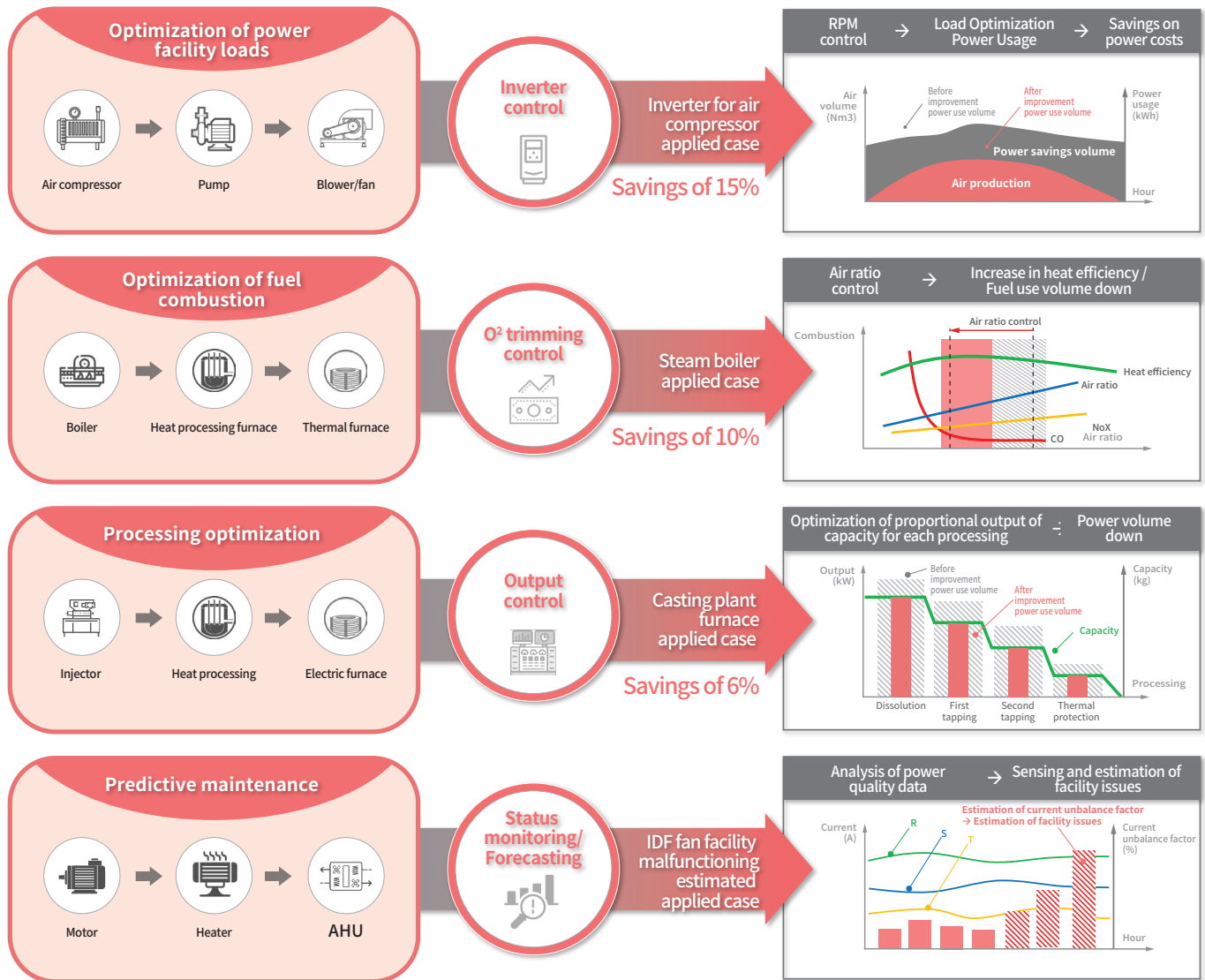


- 3 Energy Management System Consulting



② Structuring energy savings control system
: Introduction of various control systems

② Introduction of control solution for energy savings and cost savings
: Realization of savings effect on the basis of accurate examination



Relevant government subsidy business



EnMS infra structuring subsidy business
: Subsidy for structuring - KRW 100 ~ 200 million
: Corporate contribution - 30% (SME)/60% (leading company)



Reduction of greenhouse gas for food division (EnMS structuring) subsidy business
: Subsidy for structuring - KRW 150 million
: Corporate contribution - 50%



Carbon neutrality-type smart plant
: Subsidy for structuring: KRW 50 ~ 200 million
: Corporate contribution - 50%

EnFra

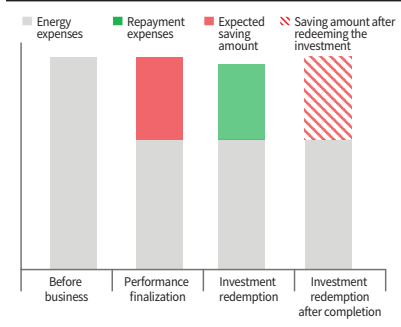
ESCO (Energy Service Company)

By providing comprehensive service, such as technology, fund procurement and so forth, to the energy saving business, it materializes the moderation of burden of corporate investment costs and practical improvement on efficiency

Outline

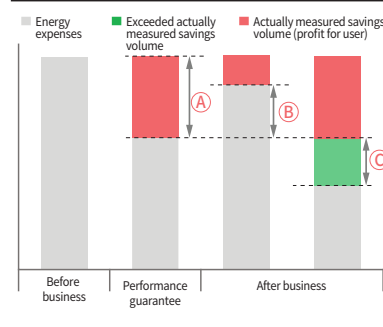
A system that replaces the energy use facility in lieu of company lacking the technology and fund procurement capability and provide fund lending support for the business that it guarantees the energy saving effect arising thereof that it is the business with the following three methods

Performance finalizing-type



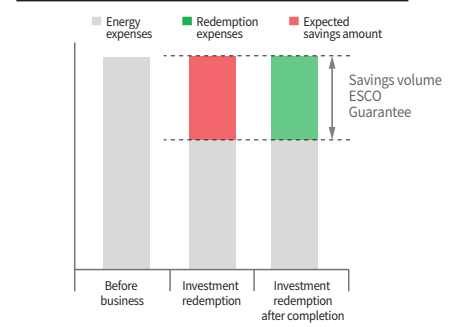
- Procurement of independent investment fund for ESCO
- Distribution of savings amount with energy user
- All savings amount after retrieving the investment cost is owned by the company
- The saved amount after retrieving the investment cost is not guaranteed

Guarantee of user financing performance



- Procurement of investment fund by the company
- Guarantee of savings amount by ESCO + post management
- A Guarantee savings volume = Actually measured savings volume (business expiration after the post management)
- B Guarantee savings volume > Actually measured savings volume (ESCO conserves the different amount)
- C Guarantee savings volume < Actually measured savings volume (distribution of amount of difference with stipulation)

Performance guarantee of ESCO financing



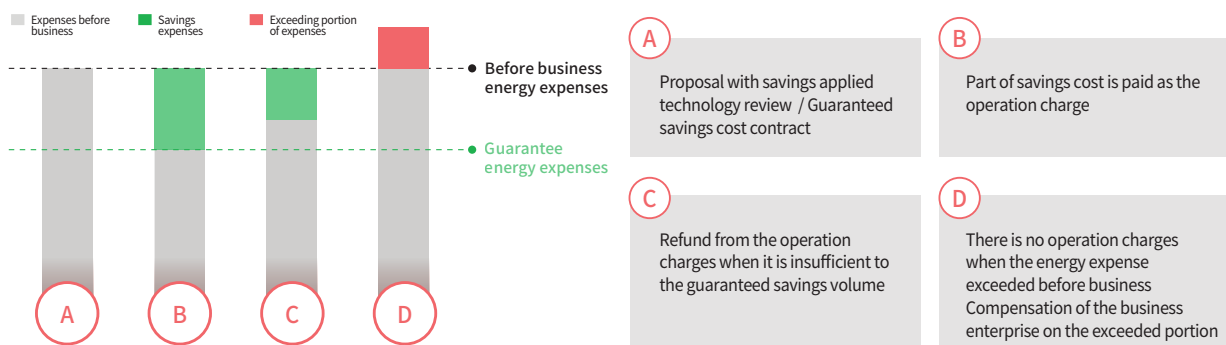
- Procurement of investment fund of ESCO
- Distribution of savings amount under the stipulation
- Saved amount after retrieving the investment cost is kept by the company.
- Guarantee of savings amount after retrieving the investment costs + post management

Expected effect

- Relieving the technical risk bearing following investment
- Tax deduction of investment on energy savings facility through ESCO (income tax or corporate tax: SME for 7% and leading company for 3%)

ESCO by EnTL

- The fund of EnTL's own is used for performance guarantee on energy cost savings without procuring the fund of financial institution or policy fund
- The burden for facility investment fund of the customer is removed and savings amount is guaranteed, and certain part of the saved amount is shared for operation and maintenance expenses to distribute the performance outcome
- When the guaranteed savings amount is insufficient, the amount difference is conserved to relieve the risk of monetary damage of the customer



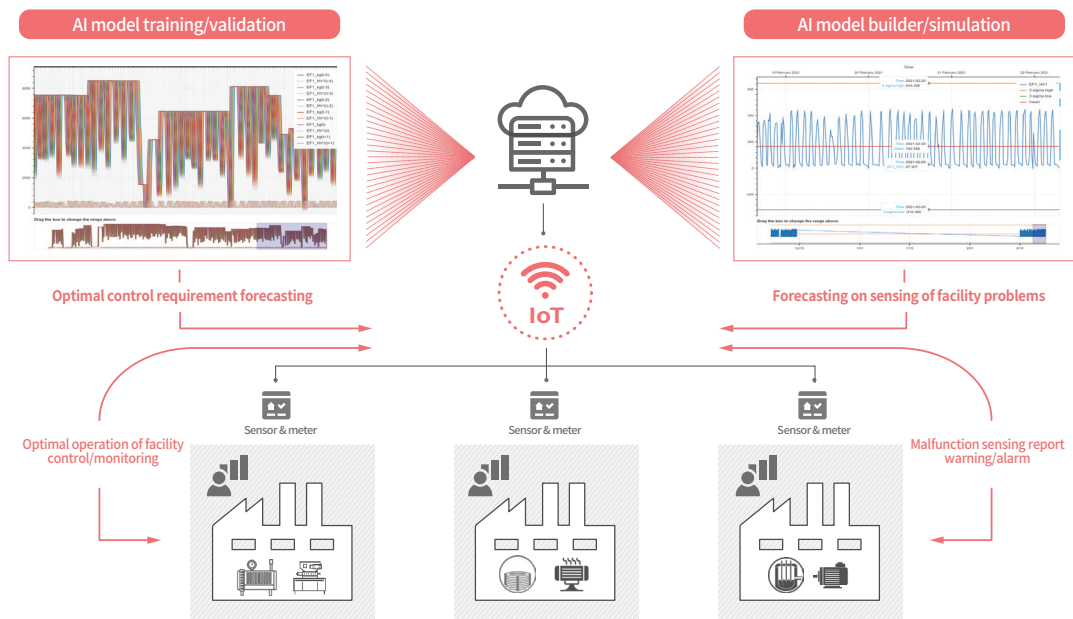
EnFra

AI(Artificial Intelligence)

Formulation of optimal operation plan with the forecasting model that integrated diverse changes and risk elements, learning → progress → maintaining optimal condition

Outline

The AI analysis tool is provided for various problem solutions, such as, energy demand / supply relations forecasting, status monitoring and prediction of important energy use facility, modeling of optimal processing operation following various production requirement changes, control linkage and so forth.

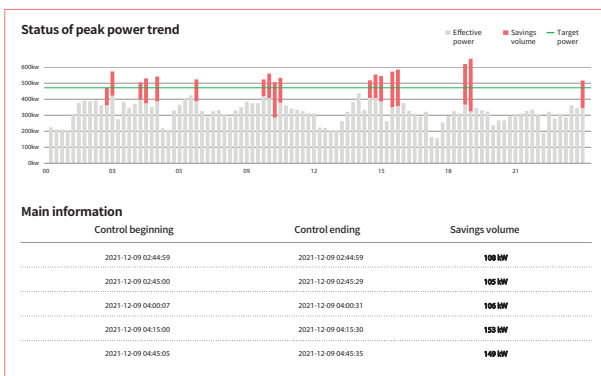


Applicable case

1 AI peak control system

- When demanding for power throughout the business premises, forecasting for one unit (15 minutes)
- The expected value of peak power materializes the power maintenance through the facility auto control when forecasting in excess of target power

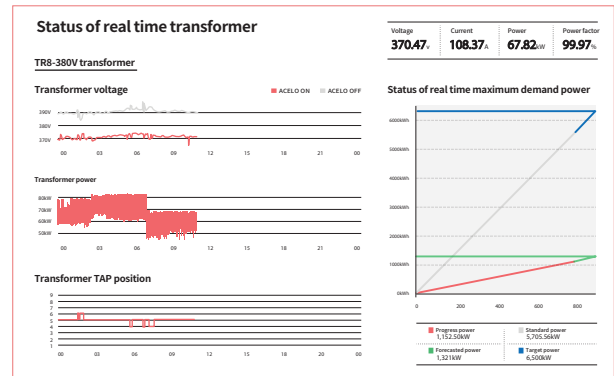
AI peak control system screen



2 AI VO (Voltage Optimization) system

- Forecasting the voltage trend of entire business premises or the load side transformer
- Saving power through the auto control of voltage scope following the load

AI VO(Voltage Optimisation) screen



Partner

EnTL plans and provides the service appropriate to the characteristics of customers through the partnership with competent data-based solution specialized company.

MiPU Italy-located industrial division energy facility management
AI platform development specialized company
<https://mipu.eu>

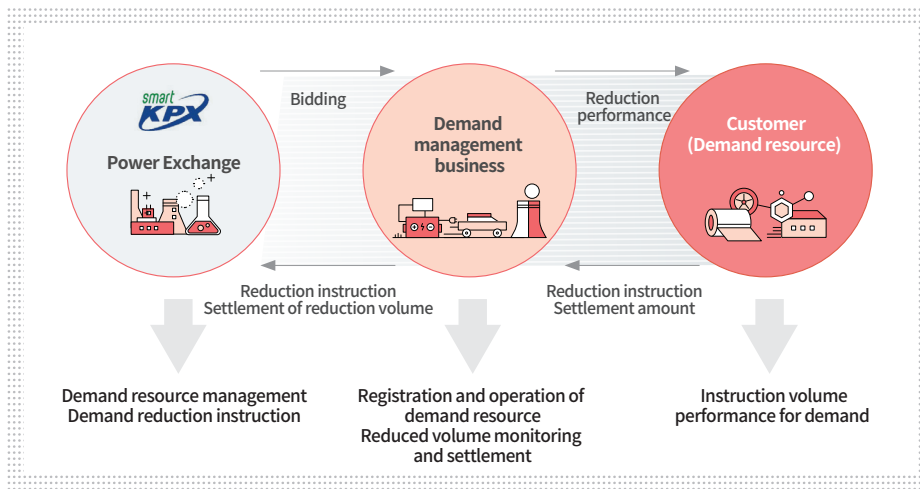
CROCUS Korea / Silicone Valley-based AI voltage control solution, electric car charger manufacturing specialized company
www.crocusenergy.com

DR (Demand Response)

A system to equivalent compensation with the power generation in the power market as much as the saved volume with the power saved by a company as the demand resource

Outline

A system the electricity saved when the price of power market is high is sold to the power market with the compensation in monetary terms in the demand response (DR) transaction market



Method of transaction

1 Obligatory reduction

- Advanced contract for deductible capacity
- Issuance of demand reduction request of the power exchange
- Performance of obligatory reduction of capacity
- Reception of basic settlement amount

2 Voluntary reduction

- No obligation of performance
- Bidding for price in the market a day earlier (Bidding at its discretion for the reduceable capacity and price on the transaction day regardless of the reduction contract capacity)
- Winning the bid by the lower price than the power generation price
- Reception of reduction settlement amount

Expected effect



There is no investment from customers. (1 minute signal meter & FEMS payment expenses are replaced and the profit)

DR: Generating monthly income when applying for 100% or more
There is no loss to customer company even in a case of breach
Saving basic charges with the peak control and generating the income of maintenance

Reduction training: Finalize to implement between 1-2 week in June and 1-2 week in December of each year
Actual situation: Clarification of the criteria to issue during severely hot or cold period (Issued when approaching to the reserve rate of 5 million kW)
Business response: Securing inventory, safety education, machine inspection and environment beautification of the scheduled month on business plan

Decrease in basic charges and rate application of KEPCO
Group of small and medium type of less than 2,000kW for contract capacity for KEPCO: Enforcement rule only for an hour for each time

Auto DR based response DR system (Frequency / flexible DR response)

When there is 59.85Hz or less of frequency based on the national power grid, the contract capacity of contracted DR is reduced up to 10 minutes.

Differentiated payment for the settlement amount following the frequency of issuance (1st time: KRW 2,600/kW, 2nd time: KRW 1,560/kW, and 3rd time or more: KRW 1,040/kW)

By facilitating the loads of multiple business premises and the integrated resource, possible to generate income only by performing short-term reduction (minute unit)

[Features and strengths]

By controlling the operation rate of the facility without any issue in the production processing, there is no need for the manager to carry out the additional works, such as, reception of reduction instruction for the performance of reduction volume, adjustment of facility operation plan, etc.

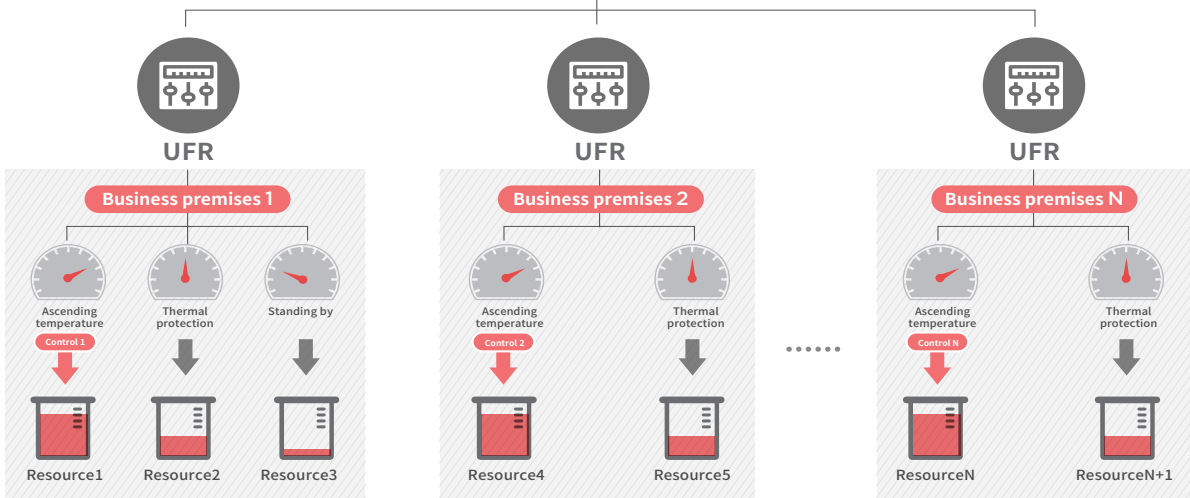
EnTL holds the technology and patent of auto DR system structuring that automatically carries out the reduction volume by selecting the capacity available for facility control in consideration of issues, including production disruption, quality decline, etc.

Conceptual drawing of dispersed resource auto DR integrated operation transaction service

Cloud server



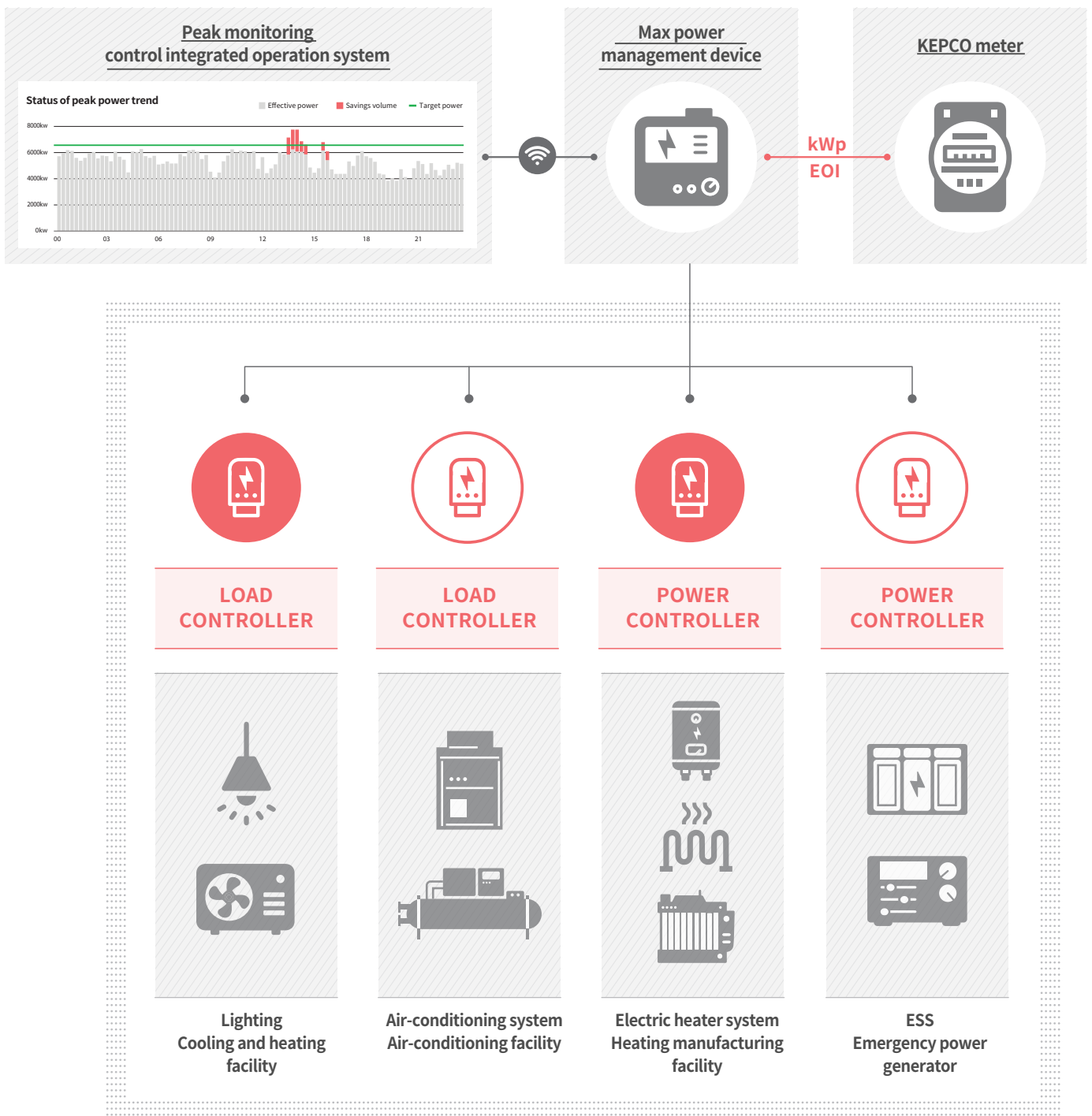
Auto response / control when system frequency is declined below 59.85Hz



Induced electric furnace resource group

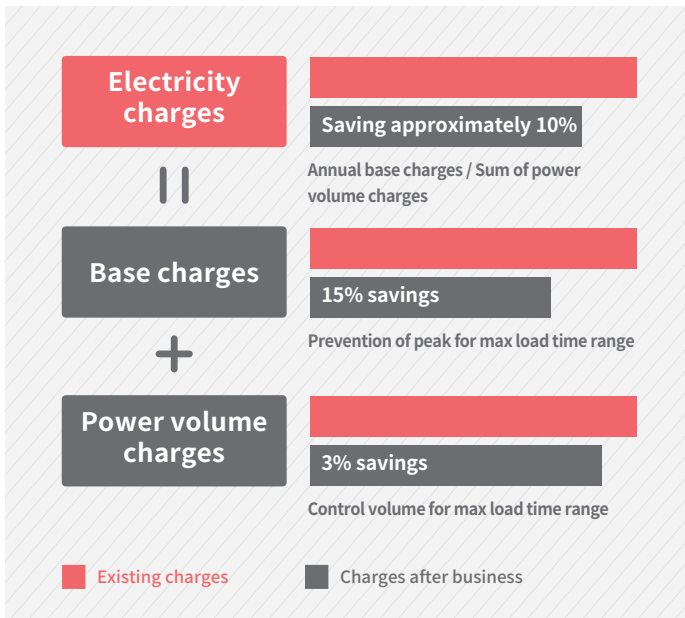
Main contents

- ① Maximum power management by applying the auto control
- ② Various control technologies, including, production / environment / incidental facility, etc.
- ③ Minimizing operation solution that interferes with productivity

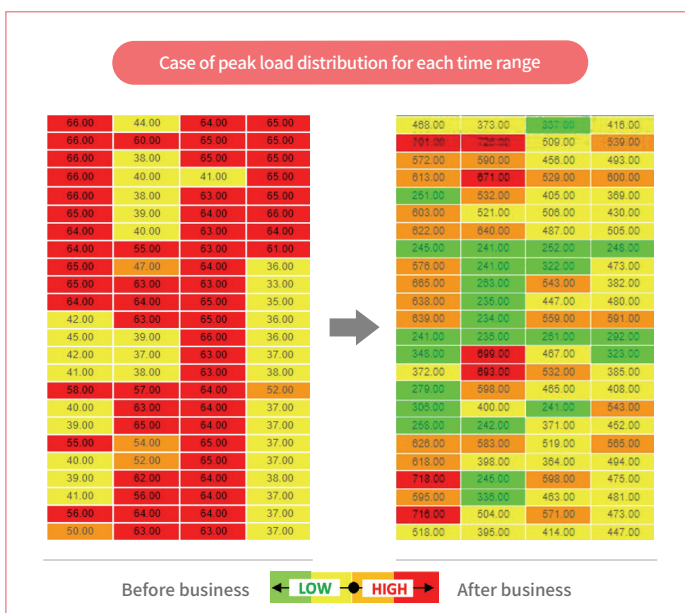


Expected effect

- ① Saving basic charge for electricity
By managing the power peak of the max loading time range, the base charge is saved and optimal management is available.
- ② Zero installation investment costs by using ESCO business
Performance guarantee operation contract is available when using ESCO by EnTL
No early investment cost and increase operation stability



Global reach for future growth.



EnPlan.

ESG (Environmental, Social and Governance)

Establishment and performance of effective response plan of domestic and overseas industrial and environmental regulations that reflected the changes of management strategy environment

Outline

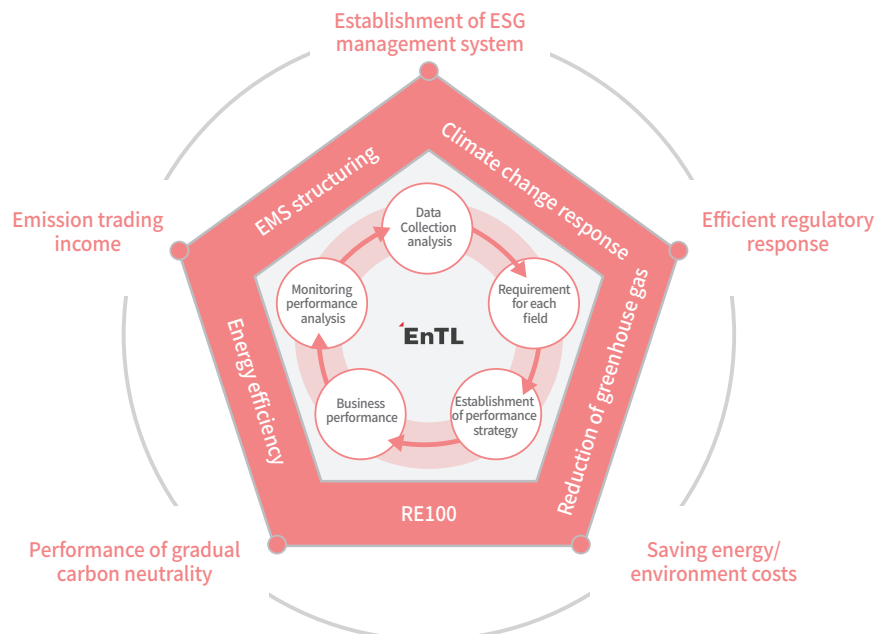
ESG responding consulting

Following the change in management environment, including, environment-friendly energy, crisis from climate change and so forth, the importance of ESG management has been enhanced. Under such environment, EnTL is committed to contribute to the accomplishment of the corporate ESG goal through various consulting services in the environmental part.



Main services and expected effect

- ① Comprehensive ESG consulting: Consulting on establishing the performance strategy for each phase through the examination for corporate status and introduction and performance of ESG management following the detailed performance plan for each field
- ② Consulting for each field: Detailed performance plan or consulting following the corporate requirements

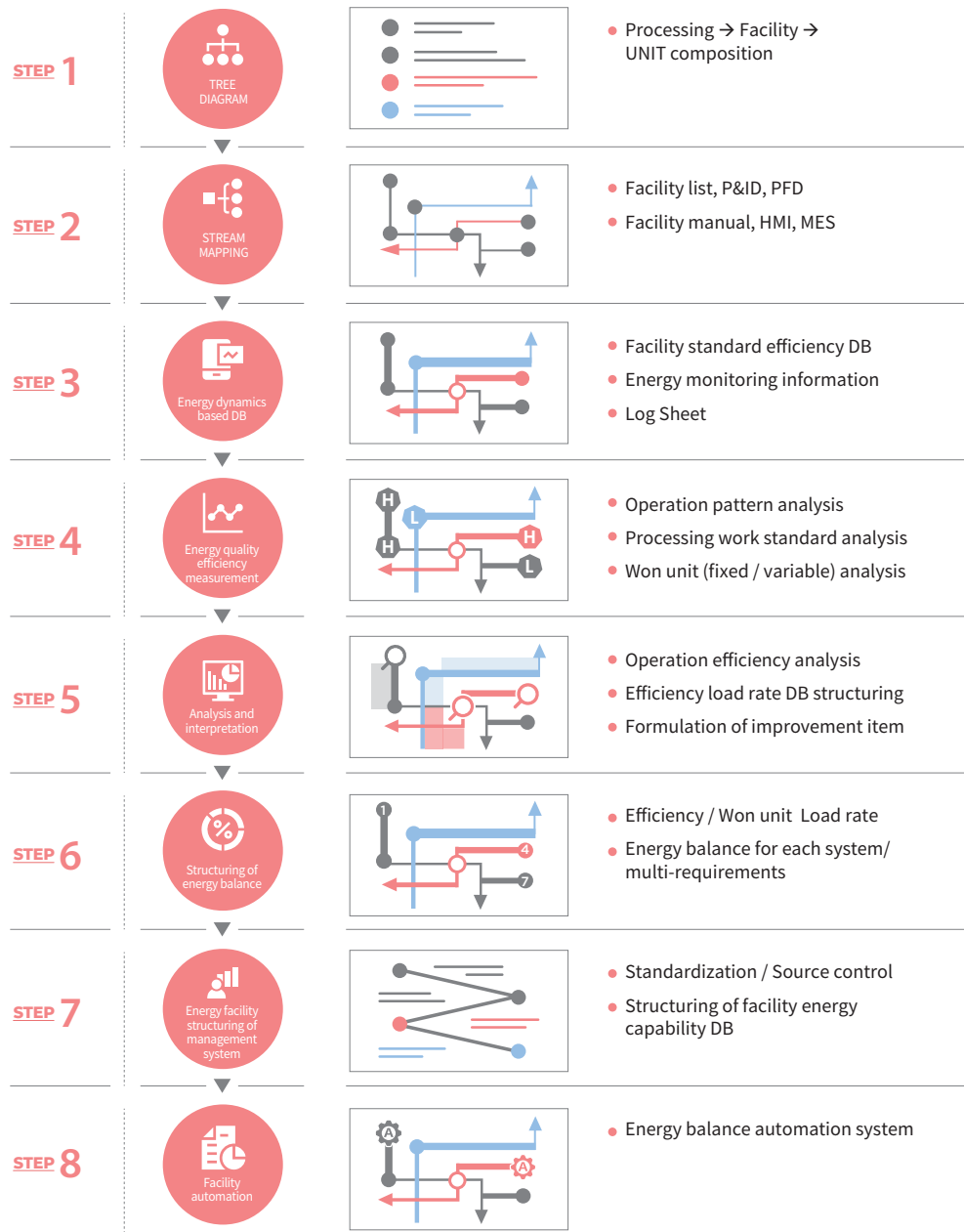


EnPlan. EEX (Energy Efficiency EXcellence)

Establishment of long-term and short-term efficiency investment strategy through diverse energy analysis, such as, facility, system, processing and so forth beyond an isolated energy examination

Main services and expected effect

- ① Establishment of efficient management DB of individual facility -> facility management standardization
- ② Formulating the system balance analysis and optimization plan through detailed mapping of energy flow → Formulating diversified efficiency improvement business plan
- ③ Formulation for each phase of short-term and long-term individual strategy in structuring of smart energy system → long-term and short-term investment plan and economic feasibility for priority sequence of improvement → Establishment of strategy for structuring smart energy plant



EnPlan.

PV (Photo Voltaic Power)

Recycled energy power generation / Facilitation / Establishment and performance of strategy

Main services



① EPC

- Engineering: High efficiency power generation system, optimal equipment and materials, long-term life cycle and stable operation
- Procurement: Facility procurement, such as, solar energy module, inverter, ESS battery and others of optimal price
- Construction: Systematic schedule and quality control



② Financial service

EnTL provides various financial services to outstanding work cooperative companies through the partnership with ENlighten to relieve the burden of funding issues.

- Loan on equipment and material distribution: All manufacturing is provided with minimal price purchase of equipment and material, providing minimum price loan, statement of covenant of carbon certificate module and supply
- Loan on construction costs: No need for up to KRW 900 million per MW, advance payment for each construction phase, performance guarantee bond on business security and advance payment
- Solar energy on plant roof: Optimal financial procurement (available for both lease / independent means), up to KRW 680 million per 1 MW for 20 year to the plant owner for lease income and the lease payment is available for prepayment for up to 10 years



③ Operation and brokerage

Collect the data appropriate to the diversified characteristics of the power plant and use the integrated IT solution available for monitoring to provide the efficient power generation operation and brokerage service

- O&M, office consignment service: Real time power generation monitoring that applied the integrated management system for power generation, big data based remote examination service, etc.
- Power brokerage service: Brokerage of optimal power sales through estimating the power generation volume
Energy new business related transaction facilitation plan and brokerage, such as, RE 100, emission right and others

Partner

EnTL plans and provides the service appropriate to the characteristics of customers through the partnership with competent data-based solution specialized companies



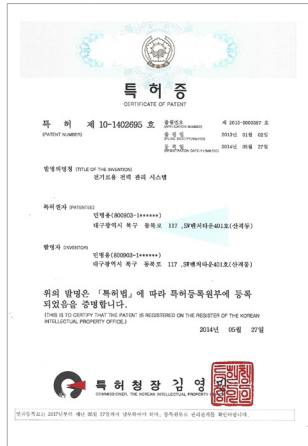
Solar energy specialized business platform / RE100 / VPP
enlighten.kr

(舊) SolarConnect

Certification



Certificate of patent



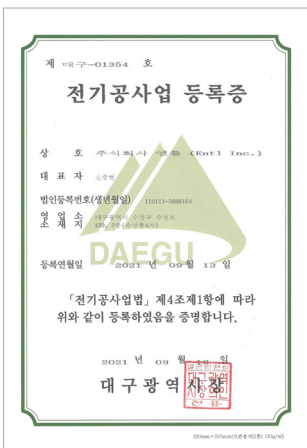
Certificate of patent



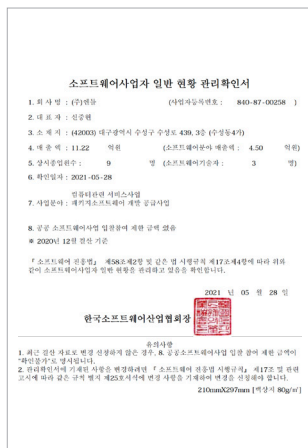
Certificate of patent



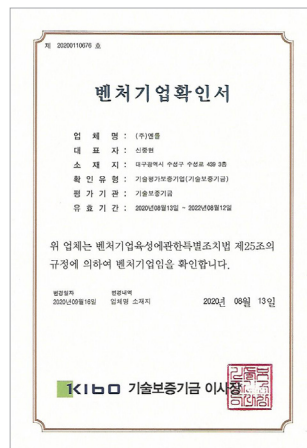
Certificate of patent



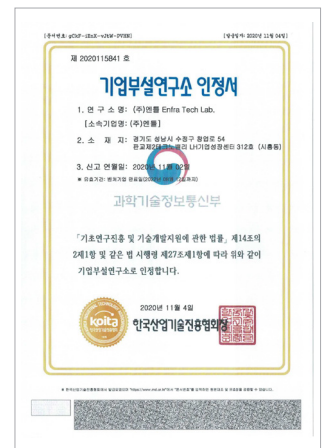
Certificate of electricity work business registration



Confirmation of SW business enterprise



Statement of venture enterprise confirmation



Certificate of corporate annex research institute



Enfra Service

EnTL composes and provides energy technology service that is appropriate to the needs of customers in various business types and materializes the improvement in energy efficiency.

* A number of service may be planned and provided including government chartered business structurings (subsidiaries/ assistant fund) for minimizing the funding for customers.

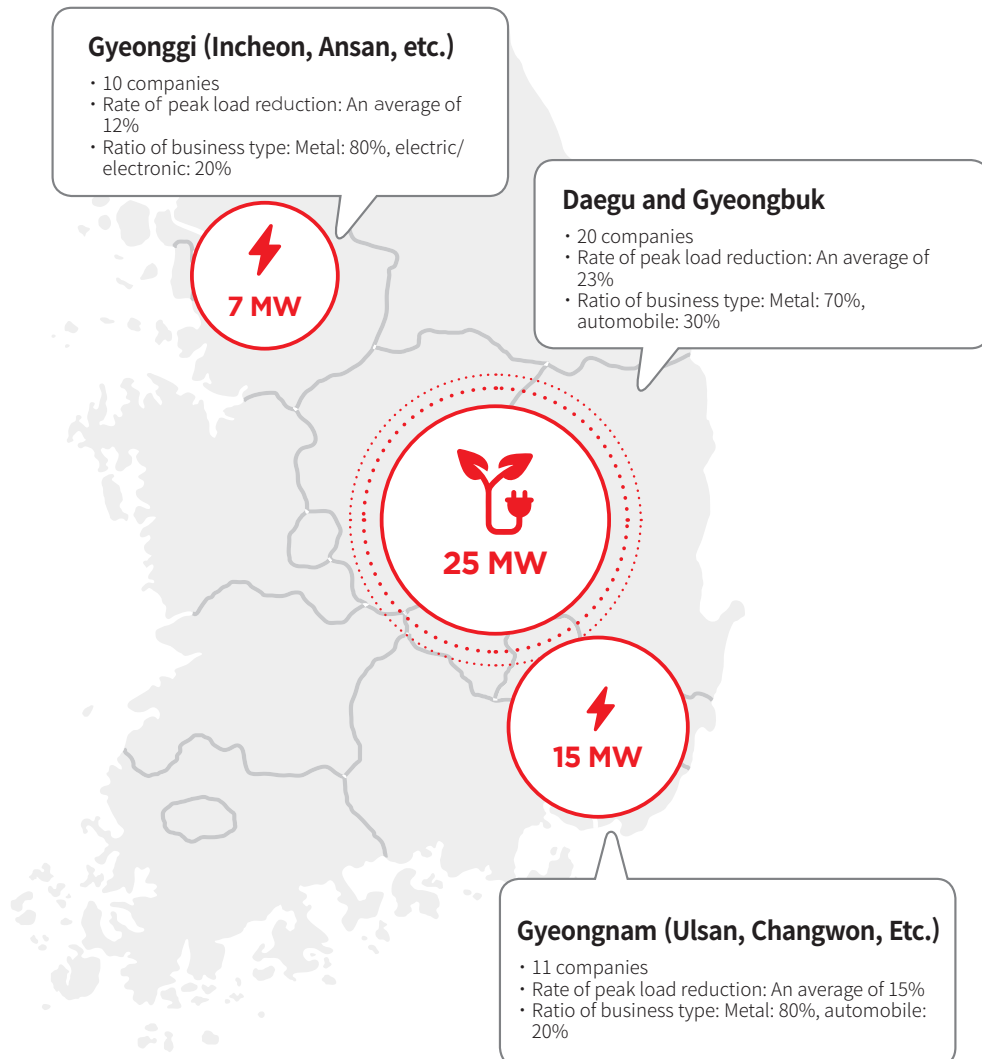
EMS	ESCO	DR	DC	AI	Year	Companies	Region	Business type	Contents of major businesses
					2021	Daechang	Ansan	Metal	AI peak control system
						Daeshin Metal	Changwon	Metal	Smart FEMS structuring/ High efficiency facility replacement
						Buseong Metal	Siheung	Metal	Smart FEMS structuring
						Sambo Jugong	Goryeong	Metal	Smart FEMS/EnMS consulting
						Seowon	Ansan	Metal	Smart FEMS/EnMS consulting/ DR resource operation
						Seongwoo Hi-tech	Gyeongju	Metal	Smart FEMS/EnMS consulting/ DR resource operation
						Sinseong S&T	Daegu Seongseo	Metal	Smart FEMS structuring
						Sinhan Precision	Daegu Seongseo	Metal	Smart FEMS structuring
						Edward Korea, Inc.	Cheonan	Electric/Electronic	Power instrumentation infra structuring
						Incheon Plant, Jinheung Casting	Incheon	Metal	Smart FEMS/EnMS consulting
						Hanyoung Precision	Changwon	Metal	Smart FEMS structuring
						CK Industry	Daegu Seongseo	Metal	Smart FEMS structuring/ DR resource operation
					Gridwiz	Seongnam	-	DR terminal installation work	
					2020-2021	Luminous Korea	Gumi	Automobile	Smart FEMS structuring
						Seah Mechanics	Gumi	Automobile	Smart FEMS structuring
						JW Bio-science	Dangjin	Pharmaceutical	Smart FEMS/EnMS consulting
					2020	Daedong Metal Co., Ltd.	Daegu	Metal	Smart DC control system structuring
						Daehan Special Metal	Goryeong	Metal	Smart FEMS/EnMS consulting
						Dongseong Castop	Goryeong	Metal	Smart FEMS/EnMS consulting
						Bucheon Casting	Incheon	Automobile	Smart FEMS/EnMS consulting
						Seogyong Metal	Goryeong	Metal	Smart FEMS/EnMS consulting
						CJ ENG	Incheon Nam-dong	Metal	Smart FEMS structuring
						K1 Metal, Plant 1	Goryeong	Metal	Smart DC control system structuring
						Taeyoung Metal	Goryeong	Metal	Smart FEMS/EnMS consulting
					Hyewon Industry	Goryeong	Metal	Smart FEMS/EnMS consulting	
					2019	Dongshin Metal Co., Ltd.	Daegu	Metal	Smart DC control system structuring
						Sedong Metal Co., Ltd.	Daegu	Metal	Smart DC control system structuring
						A Progen KIC Co., Ltd.	Pohang	Metal	Smart DC control system structuring
						Daegeon Tech	Changwon	Electric/Electronic	Smart FEMS structuring
						Singwang Tech	Changwon	Machinery	Smart FEMS structuring
						Ansan Environment Foundation	Ansan	Foundation	Local power demand monitoring system structuring
						Yeonam Tech	Changwon	Electric/Electronic	Smart FEMS structuring
						Yulchon	Siheung	Metal	Smart FEMS structuring
						E-Protech	Ulsan	Metal	Smart energy factory structuring
						Changseong Sheet	Paju	Electric/Electronic	Smart FEMS/EnMS consulting
					2018-2019	Hanju	Ulsan	Power generation	Smart FEMS/EnMS consulting
						VPH Metal	Seongju	Automobile	Smart FEMS/EnMS consulting
						Boyoung Metal	Goryeong	Metal	Smart FEMS/EnMS consulting
						Busan Jugong	Ulsan	Metal	Smart FEMS/EnMS consulting
					2018	Dongyang ENC Co., Ltd.	Pohang	Forging	Smart DC control system structuring
						Seah Changwon Special Steel Co., Ltd.	Changwon	Metal	Smart DC control system structuring
						Daeyoung Electricity Co., Ltd.	Gyeongsan	Electronic	Smart DC control system structuring
					2017	HM Metal	Haman	Metal	Smart FEMS/EnMS consulting/ DR resource operation
						Woochang Light Metal Co., Ltd.	Ansan	Metal	Smart DC control system structuring
						PNDT Co., Ltd.	Youngcheon	Metal	Smart DC control system structuring
						Air Force 11th Fighter Wing	Daegu	National defense facilities	Remote control system of the power generator
						Air Force 17th Fighter Wing	Cheongju	National defense facilities	Remote control system of the power generator
						Air Force 1st Fighter Wing	Gwangju	National defense facilities	Remote control system of the power generator
						Moorum SP	Daegu	Paper	Smart energy factory structuring
						Younghwa Metal Co., Ltd.	Changwon	Metal	Smart DC control system structuring
						aegwang Metal	Busan	Metal	Smart FEMS/EnMS consulting
						Paris Croissant Daegu Plant	Daegu	Food	Smart DC control system structuring
					Pyeonghwa Gigong Co., Ltd.	Daegu	Metal	Smart DC control system structuring	
					2016	Maeil Co., Ltd.	광주	Food	EnMS consulting
						CP Korea Co., Ltd., Zero House	광주	Chemical	Power steam instrumentation infra structuring
						Union Tech	김해	Metal	Smart DC control system structuring
						KM Tech Co., Ltd.	고령	Metal	Smart DC control system structuring
						Korea OSG	대구 성서	Metal	Smart FEMS/EnMS consulting

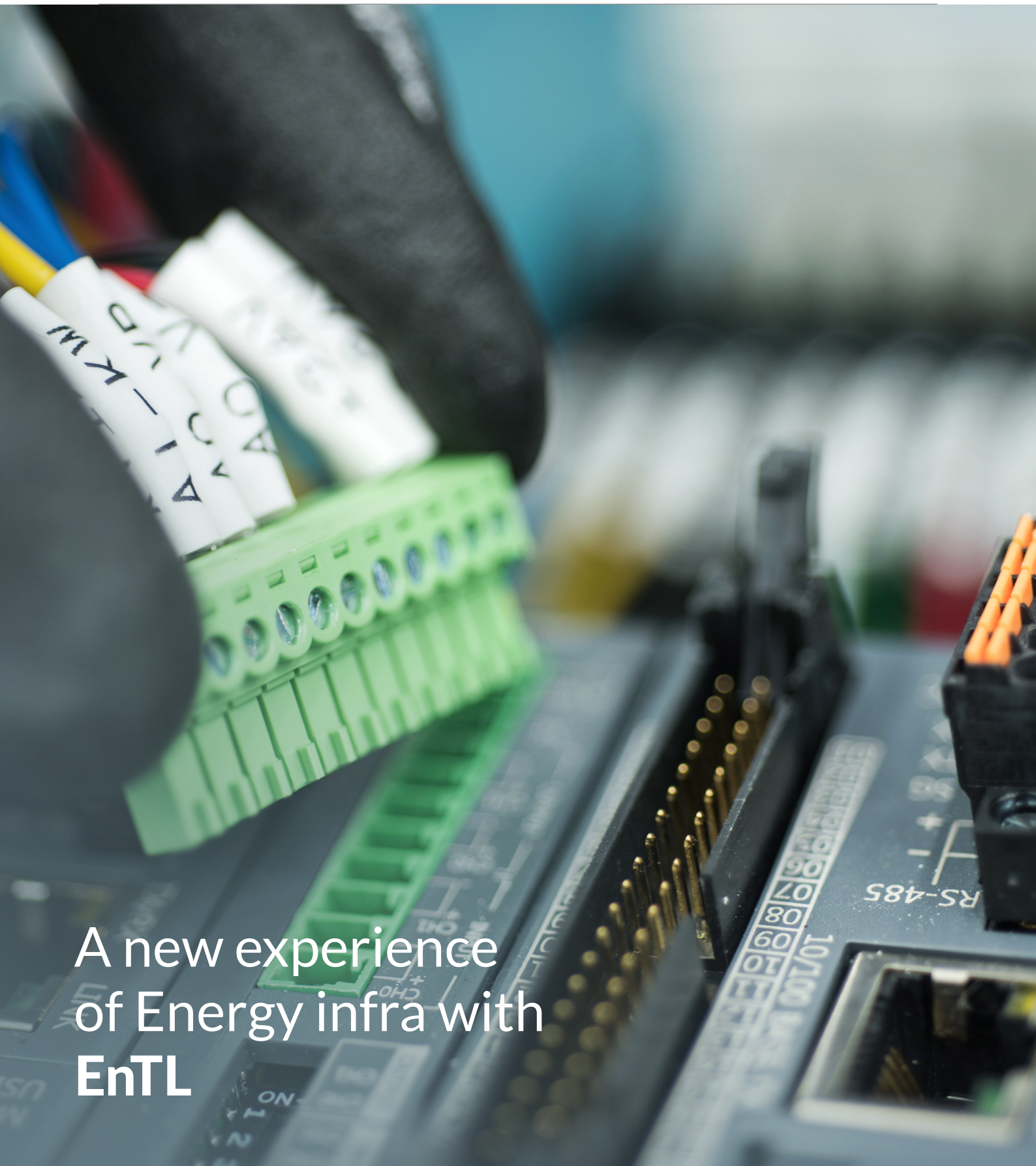
EnPlan Service

EnTL presents the strategy on low carbon and high efficiency for sustainable growth of its clients and carries out the future energy technology studies.

ESG	EEX	PV	Year	Companies	Region	Business type	Contents of major businesses
			2021	National IT Industry Promotion Agency	Seoul	Public institution	Research on AI integrated energy efficiency improvement technology
				Cheongpung	Daegu	-	Plant roof-type solar energy power plant (100kW)
			2017-2021	Stemco Co., Ltd.	Cheongju	Electric/Electronic	Consulting on strategy to respond to emission trade system
				JW Bio-Science	Dangjin	Pharmaceutical	Consulting on strategy to respond to emission trade system
			2019	JW Pharmaceutical	Dangjin	Pharmaceutical	Consulting on monitoring of external business in emission trade system
				Korea Energy Corporation	Ulsan	Public institution	Research on developing the energy efficiency examination analysis tools
			2018	Stemco Co., Ltd.	Cheonan	Electric/Electronic	Consulting on strategy to respond to emission trade system
				Wujimak Korea	Emseong	Machinery	Consulting on strategy to respond to target management system
				YKT	Ansan	Electric/Electronic	Consulting on strategy to respond to target management system
			2016-2018	Chungbuk National University	Cheongju	Educational institution	Consulting on strategy to respond to emission trade system
				Daeho PNC	Pohang	Machinery	Consulting on strategy to respond to emission trade system
			2016	Chungmu Chemical	Jeongseon	Cement	Consulting on strategy to respond to emission trade system
				Korea NSK	Changwon	Machinery	Consulting on strategy to respond to target management system

Status of operation capacity for power peak load control





A new experience
of Energy infra with
EnTL

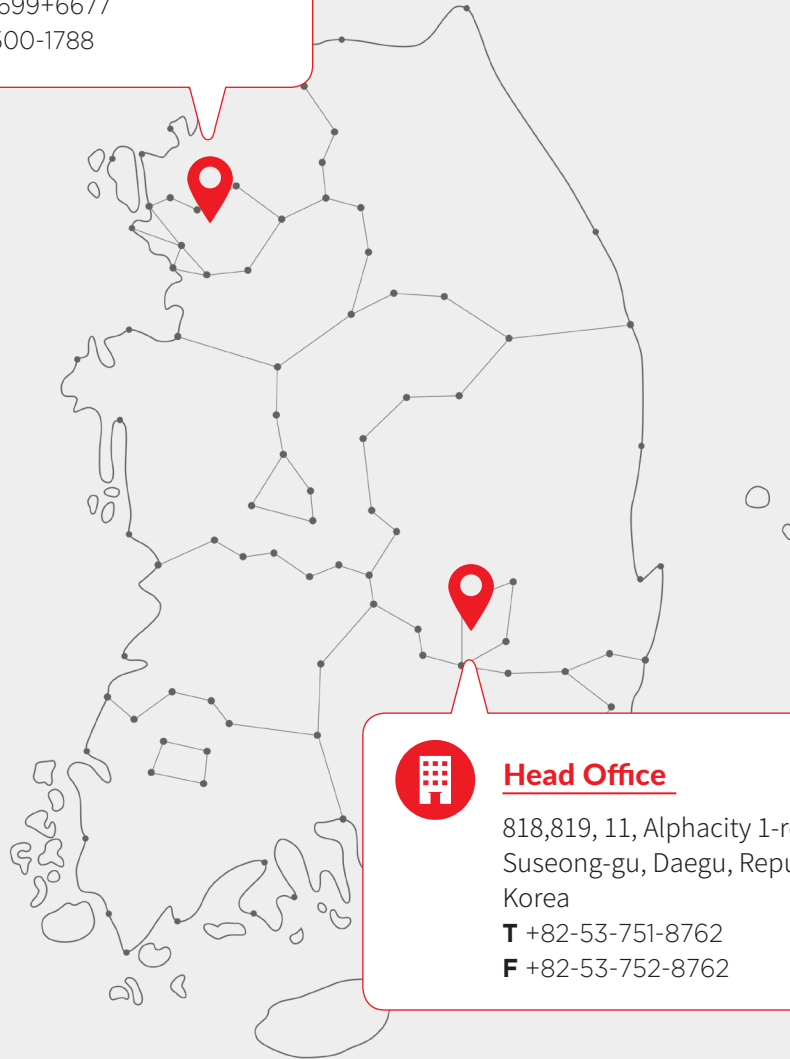


Over the **Energy** savings
To the **Lean** solutions



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