

New Renewable Energy



FTENE Inc.

신재생에너지 분야와 신소재분야의 선두 역할을 하고 있습니다.

㈜에프티이앤이 (FT EnE Inc.,)는 태양광사업 및 빙/수축열 시스템의 선두주자로 에너지 절약 및 친환경에너지를 이용한 사업을 중심으로 환경보호에 앞장서고 있습니다. 신재생에너지 산업에서의 국내 최대, 최고의 경험과 축적된 노하우를 바탕으로 선도기업으로 나아가기 위해 구성원 모두가 최고라는 자부심으로 기업을 이끌고 있습니다.

또한, 오랜 기간의 연구 끝에 독특한 전기방사 기술을 개발하여 나노사이즈 섬유에 대량생산에 성공하였으며, 이를 나노 멤브레인의 형태로 섬유에 접합하는 등 기능성 섬유를 위한 나노 멤브레인화 및 초고효율 필터 및 엔진, 가스터빈 시장을 대상으로 세계 굴지의 필터와 섬유 회사들과의 협력을 통하여 성장에 박차를 가하고 있습니다.

㈜에프티이앤이의 신재생사업실은 태양광 발전소의 사업 검토부터 설계, 시공, 사후관리까지 태양광시스템의 토탈 솔루션을 제공하고 있으며 국내 MW급 이상의 대규모 상업 발전소를 시공 및 관리하고 있습니다.

또한, 2009년부터 한국에너지공단 등의 태양광보급사업 참여 기업으로 선정되어 다년간의 경험을 바탕으로 국내 태양광 산업발전에 앞장서는 태양광분야의 선두주자입니다. 또한 기타 신재생에너지 및 ESS사업 등 다각도로 사업을 확장해 나가고 있습니다.

㈜에프티이앤이는 신재생에너지와 신소재분야의 독보적인 기업이 되기 위해 끊임없이 노력하여 앞서가는 기업으로 지속 성장하겠습니다.

We take the head In the field of renewable energy and advanced materials

FT EnE Inc. is a front-runner in the Photovoltaic and TES system. Take the lead in environmental protection centers on energy-saving and renewable energy. Emerging from the country's largest, most experienced and accumulated know-how in the new renewable energy industry. To move forward, the company is leading the company with the utmost pride of its members.

In addition, after a long period of R&D, it developed a unique electro spinning technology to produce a mass production of nano fiber. It is a unified membrane for functional fibers, such as joining the fibers in the form of nano membrane, bonded to fibers. Through cooperation with leading companies in the world of ultra-high efficiency filters and engines and gas turbine markets. We are ramping up growth.

We provide the total solution about Photovoltaic power generation plant, land development review and design, construction, O&M, totally EPC. Meanwhile, we are selected as a participating company in photovoltaic supply business by KEA (Korea Energy Agency) since 2009.

Based on years of experience, we are the leader of the photovoltaic energy field leading to the development of PV industry.

In addition, we extend the business area in the others as renewable energy and ESS (Energy Storage System) business.

FT EnE promise you, we will constantly grow up as matchless company in the field of renewable energy and advanced materials.



연혁 및 현황 : History and Information

History

General Information

Jump for the
Global Leader

2016. 02	자본금 증자 : Increase capital
2015. 02	NIKE™ 오피셜벤더 등록 (나노멤브레인) : Registered as Official Vendor by NIKE™
2014. 04	에프티이앤이 캐나다 생산공장 가동 : FTEne CANADA Factory operation was started
2010. 11	GE Energy 오피셜벤더 등록
2008. 12	사명변경(EnE system, Inc.→FineTex EnE, Inc.)
2006. 02	태양광사업 진출 : Begin the PV business
2002. 07	KOSDAQ 상장 : Listed on KOSDAQ
2002. 05	우수상품등록 (정부조달구매물품)
2002. 02	ISO9001 : 2000 / KS A 9001 : 2001
2001. 03	ESCO 전문기업 등록
2000. 08	벤처기업 인증 : Certified for a venture company
1999. 06	유망전력벤처기업 인증 (KEPCO)
1997. 06	회사설립 : Company Established

Development &
Commercialization

Establishment

설립
Establishment

1997. 06.

사업분야
Business Part

에너지, 나노사업
Energy, nano

자본금
Capital

270억 원 (2016)
27 Million USD (2016)

매출액
Sales

449억 원 (2016)
44.9 Million USD (2016)

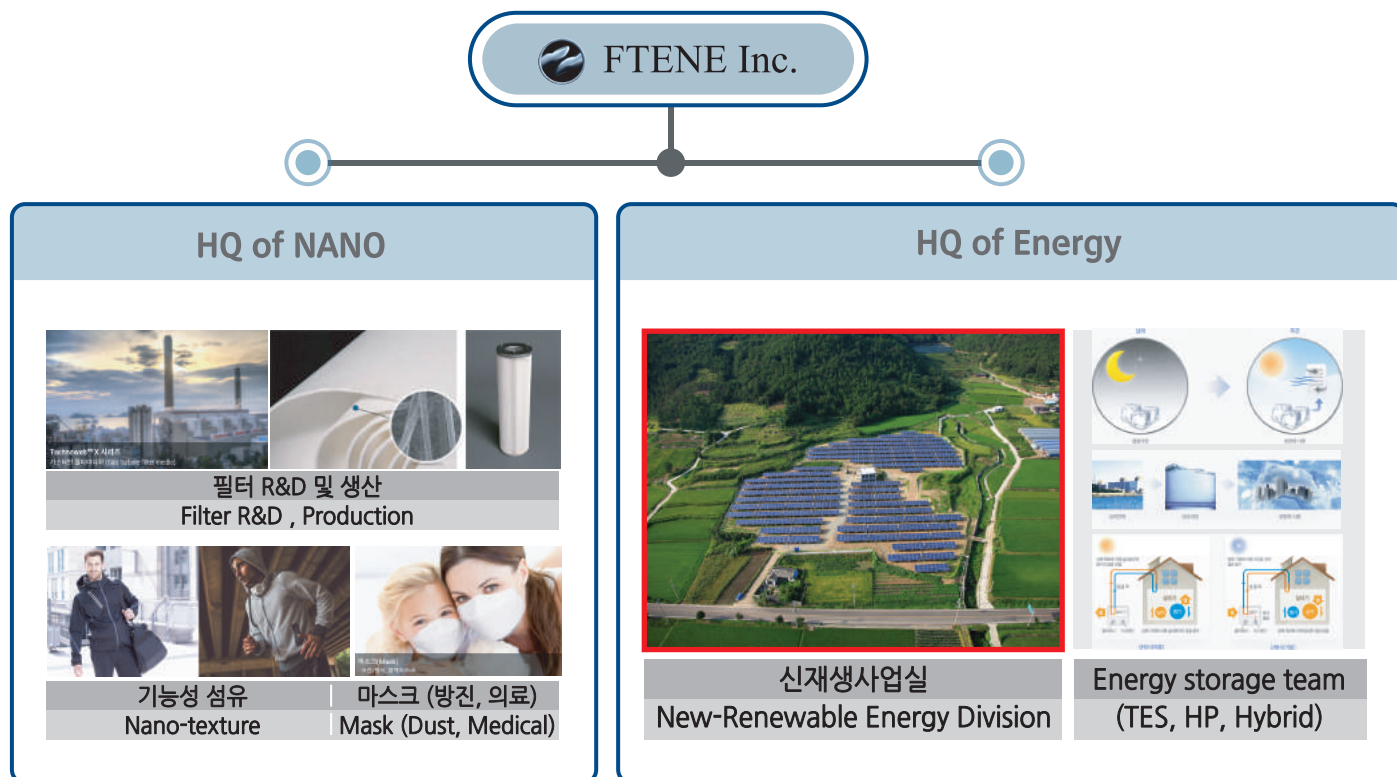
직원 수
No. of Staff

87 명 (생산직 제외)
87 Persons (Except Production)

홈페이지
Website

www.ftene.com

사업부 구성 : Map of Business Division



신재생에너지

(New-renewable energy)

》 불안한 원자력, 환경오염의 주범 석탄 (No atomic, No carbon)

- “탈원전, 탈석탄” : 새정부의 에너지/환경 정책기조
- 긴 후유증을 겪고있는 체르노빌, 후쿠시마 원전사고로 원전의 불안정성에 대한 우려의 목소리
→이에 따라 원자력 발전소를 더 이상 사용하지 말자는 ‘탈원전’ 정책이 대두됨
- 부족한 에너지는 신재생에너지를 위시한 친환경 에너지로 수급하려는 중장기적 계획 수립
- 정부예산 확충, 규제완화 등 정책적 지원에 힘입어 국내외적으로 관련 시장이 확장되는 추세
- “No atomic, No carbon” : Keynote of policy on Energy/Environment of the new government (The 19th Pres. Moon)
- The Chernobyl and Fukushima accident which suffers from long aftereffects
→“SHOULD NOT USE The Atomic power plant” public opinion
- Establish a long-term plan for obtain energy from new-renewable energy
- Expanding trend of the related market due to the government’s budget increase and deregulation



나노사업부

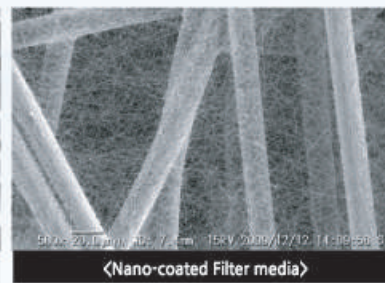
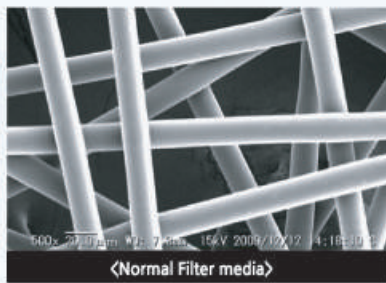
(Headquarter of NANO)

에프티이앤이 독자적 나노파이버 기술
Nano fiber Technology of FTENE

1) Filtration (Nano-filter media)

- 엄격한 EN779/EN1822 산업규정을 100% 만족 : 나노섬유만의 고유특성인 기계적 구조로 필터성능 구현
- 유리섬유 대체 가능 : 유리섬유 사용에 대한 인체 유해성, 환경오염 문제 해결
- 지구온난화와 환경오염을 통제하기 위한 해결방안 : 고효율 필터에 대한 소비자 요구 증가
- 고효율 산업용 에어 및 액체필터 소재로 사용가능 : 일반필터 대비 높은 효율과 낮은 차압 제공

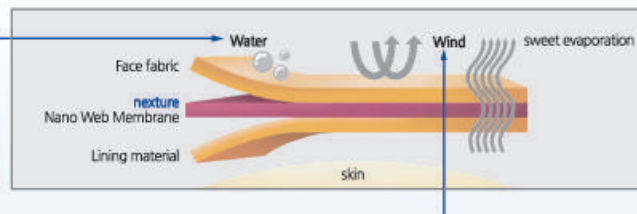
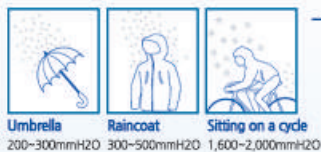
- Perfectly satisfy Industrial Standard (EN779/EN1822) : Realize a filter performance with Mechanical structure
- Substitute the glass-fiber : Solve maleficence of glass-fiber
- Solution of global warming and pollution : The needs is increasing for High-efficiency filter media
- Industrial Air & Liquid filter : Its efficiency is better than normal filter



2) Nano-fiber (Nano-membrane)

- 방수성 : 물방울 크기의 수만 분의 일 수준의 기공 크기로, 비나 눈이 와도 스며들지 않음
- 방풍성 : 다공성 구조로, 인체와 옷 사이의 적당한 체온을 유지시키는 보온 단열재 역할

- WATERPROOF : The size of stoma is Nano-level, The water and snow won't seep in
- WINDPROOF : A porosity structure, maintain body temperature efficiently



체감온도 계산법
T: (4X/V) (T: 외부온도, V: 바람속도)
Ex) 외부온도 20℃, 바람속도가 9m/h일 때의 체감온도
→ 20 - (4X/9) = 8℃

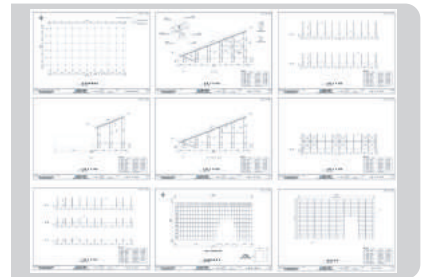


EPC

- Engineering
- Procurement
- Construction

1. Engineering

- Cutting-edge design based on survey & analysis
: Analyze a topography and shade, Simulate an amount of power based on insolation data
- Standard design according to the code & regulation
- Supplemental design for perfect plant during construction period



2. Procurement

- Based on cost reduction strategy, procure a Low cost-High quality materials
- Reduce a investment cost, Improve a quality & efficiency of power plant



3. Construction

- Perfect construction through the cutting-edge design
- Optimum construction plan to deliver in time
- Thorough construction management with supervising & auditing



O&M

Post management,
As important as
installation

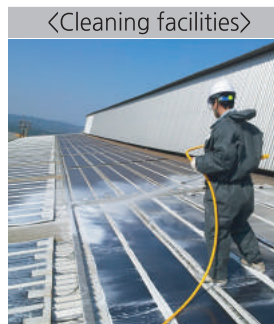
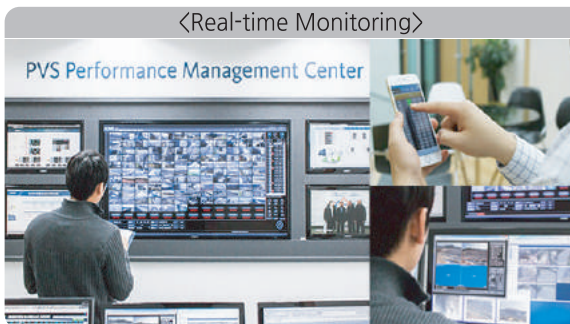


1. Needs of O&M

- Commonly reduction ratio of facilities efficiency is one percent
- Module pollution by bird-shit, fallen leaves, salinity
- Physical damage by typhoon, hail
- Connector band fire due to abnormal voltage(current)
- Array(modules) fire due to electrical fault and heat wave
- Module fire is very dangerous because it will spread for all of area

2. O&M Outline

- Real time Monitoring, Operating observation & Analyze PV power amount
- Clean for prevention of pollution
- A precise inspection with Analyzing tool (Various kind of Tester, Thermo-graphic camera)
- Remote monitoring & Professional staff resident (for MW-level station)
- Quickly dispatch for an immediate response in emergency



3. Improvement, not just maintenance

- Generation quantity & various issue analysis, Efficient operation by systematic recording
- Analyze a cause that fluctuation(Decreasing) of the quantity & Suggest a solution
- Provide the solution of renovation against decrepit facility



ESS

New Paradigm



» ESS (Energy Storage System)

PMS/EMS

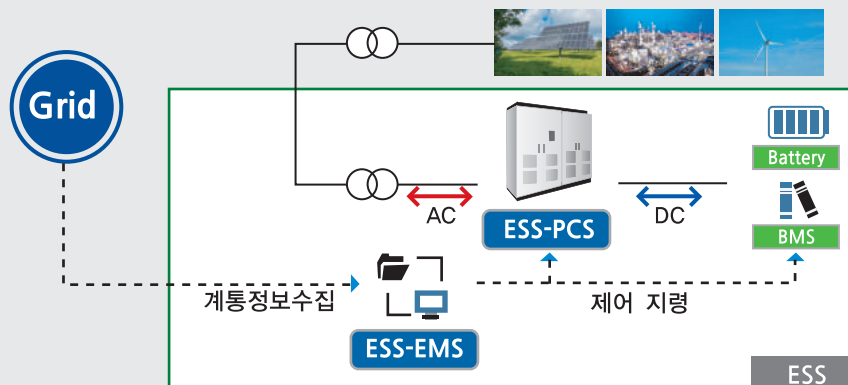
- Battery&PCS Monitoring, PCS Control, (ESS Control Feedback by EMS Command)

PCS

- Convert an Electrical property(Frequency, Voltage, Current) for Charging & Discharging on Battery

Battery

- Store(Charge) the electric Energy or Output(Discharge) the stored Energy



PCS



PMS/EMS



Battery



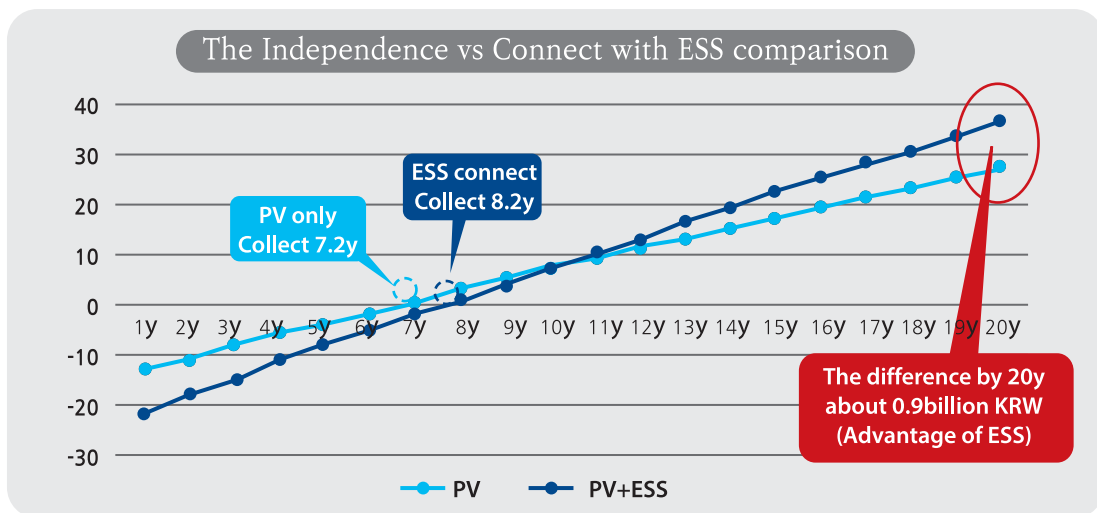
ESS

Synergy with
Photovoltaic



Interconnection operation of Photovoltaic and ESS

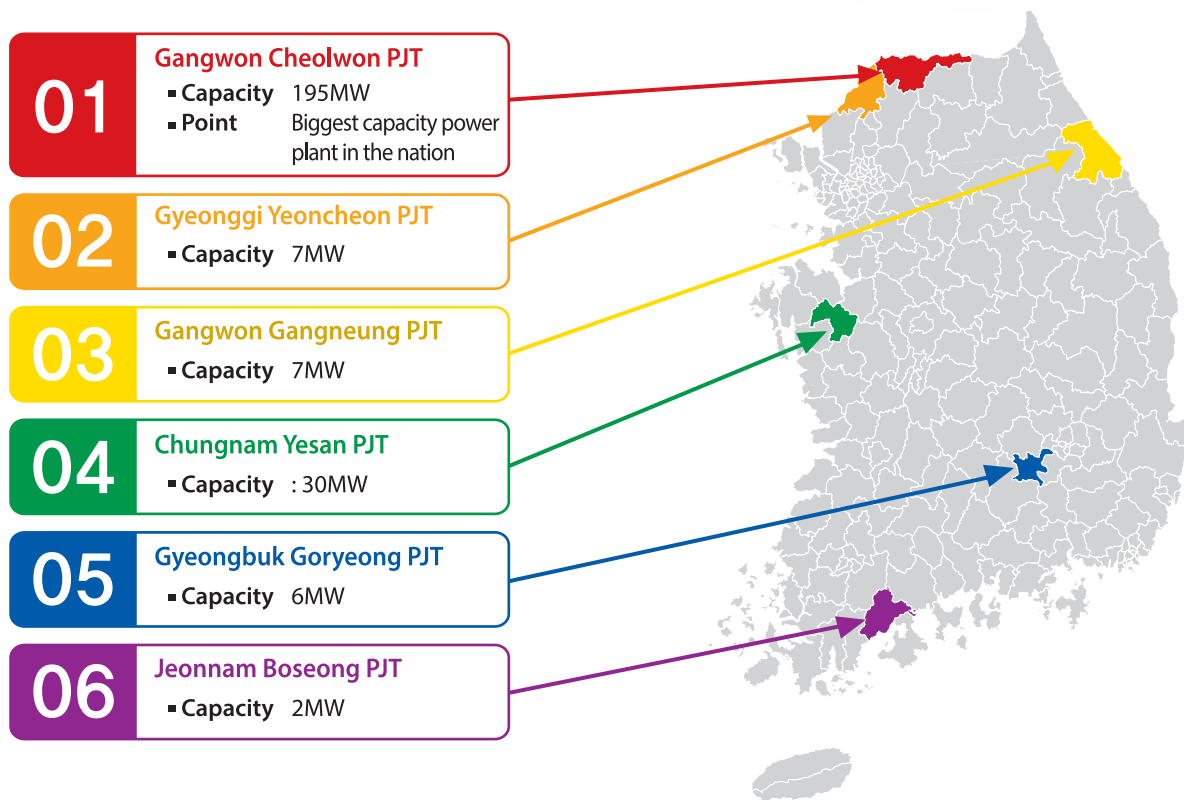
- [PV+ESS] store an energy into ESS, discharge it in time to maximize energy efficiency
- Thanks to government's strategic policy, business value is increasing



Domestic Project



Domestic Planned Project

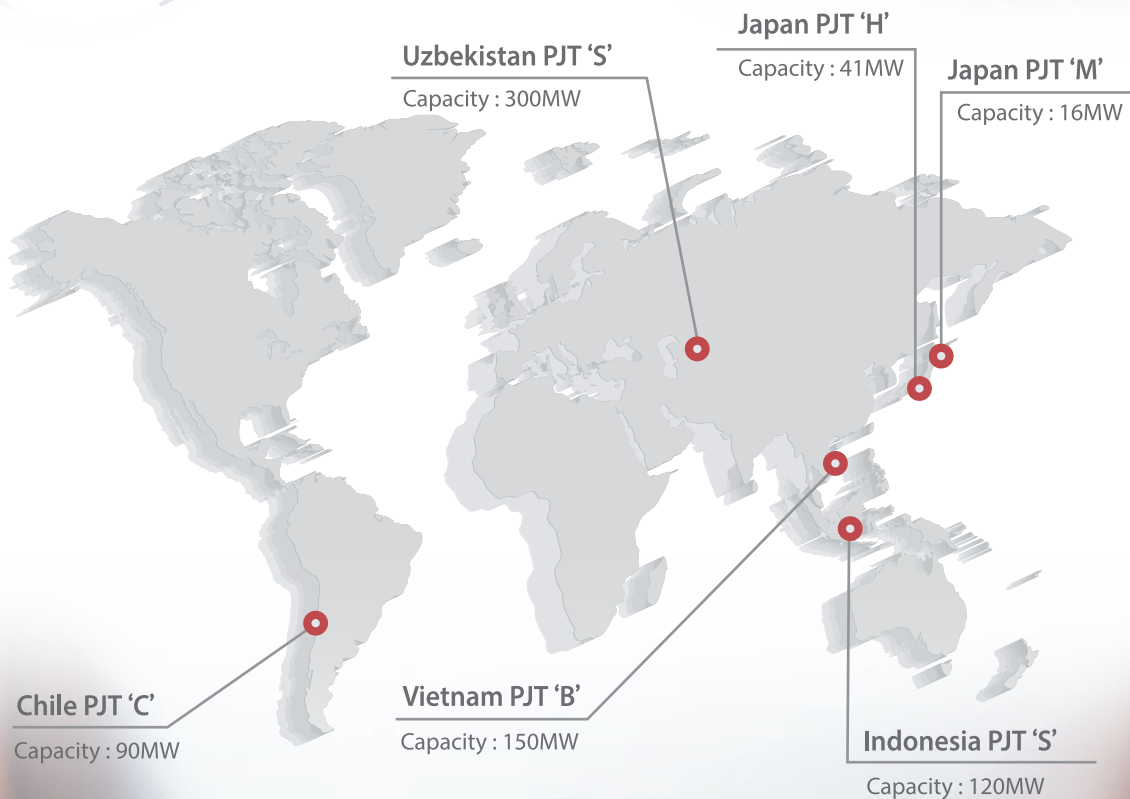


Domestic Installed Plant (MW level)

Name	Location	Capacity	Note
Jeonju PV power station	Jeonju-si Jeollabuk-do	2MW	The first plant that Have used the landfills
Hampyeong PV power station	Hampyeong-gun Jeollanam-do	1.4MW	
Haenam PV power station	Haenam-gun Jeollanam-do	1.1MW	
Seogwang solar PV power station	Yeoncheon-si Gyeongsangbuk-do	1MW	
Busan Environment PV power station	Busan Metropolitan city	1.8MW	Was sold at '2016
Gwangseok PV power station	Goheung-gun Jeollanam-do	1MW	In progress O&M by FTENE
Gwangmyeong PV power station	Euseong-gun Gyeongsangbuk-do	1MW	In progress O&M by FTENE



Overseas Project



**6 Nations of the world,
800MW of scale developing**



FTENE Inc



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