

Energia pulita e a costi accessibili con lo stoccaggio dell'idrogeno

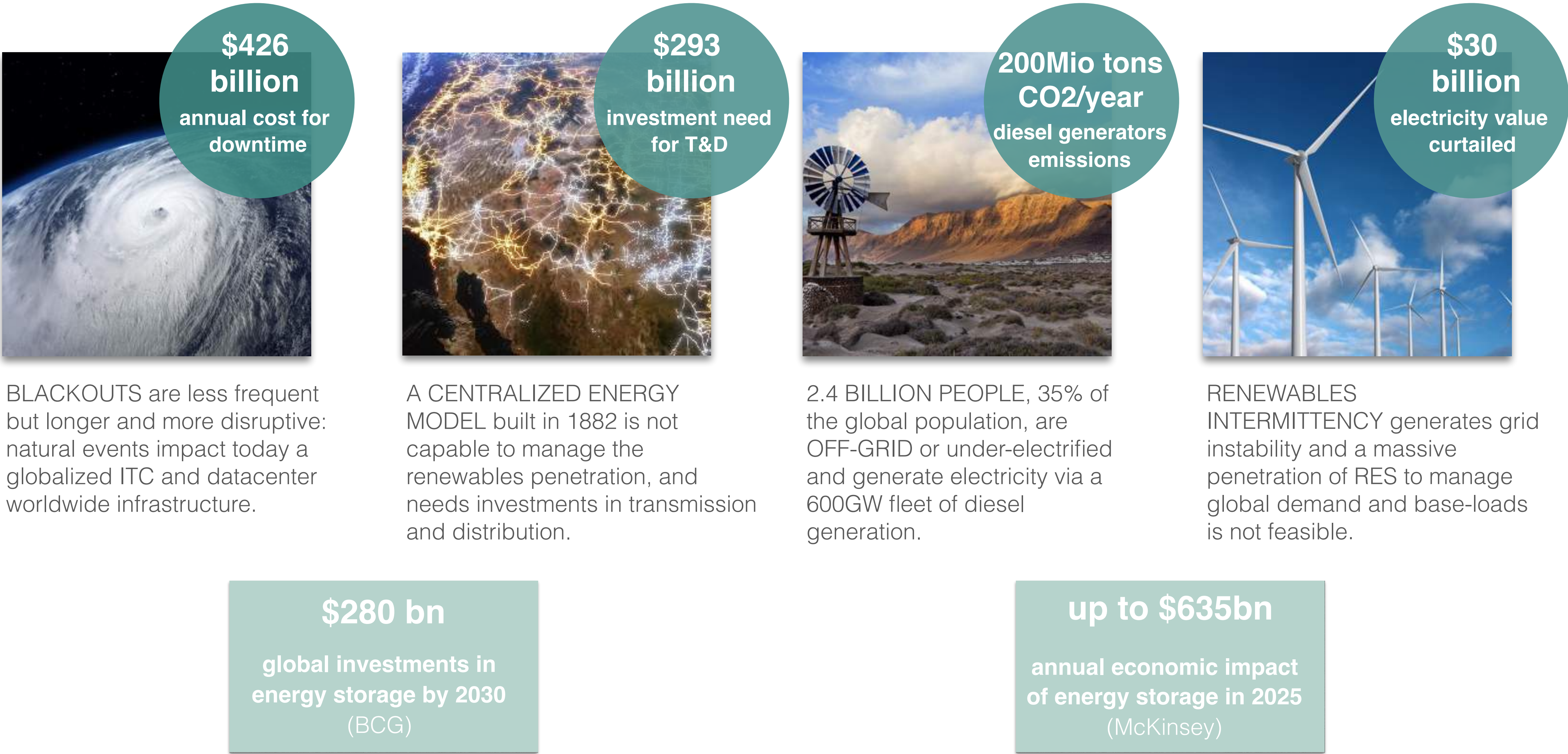
Milano, Fast, 1 luglio 2016



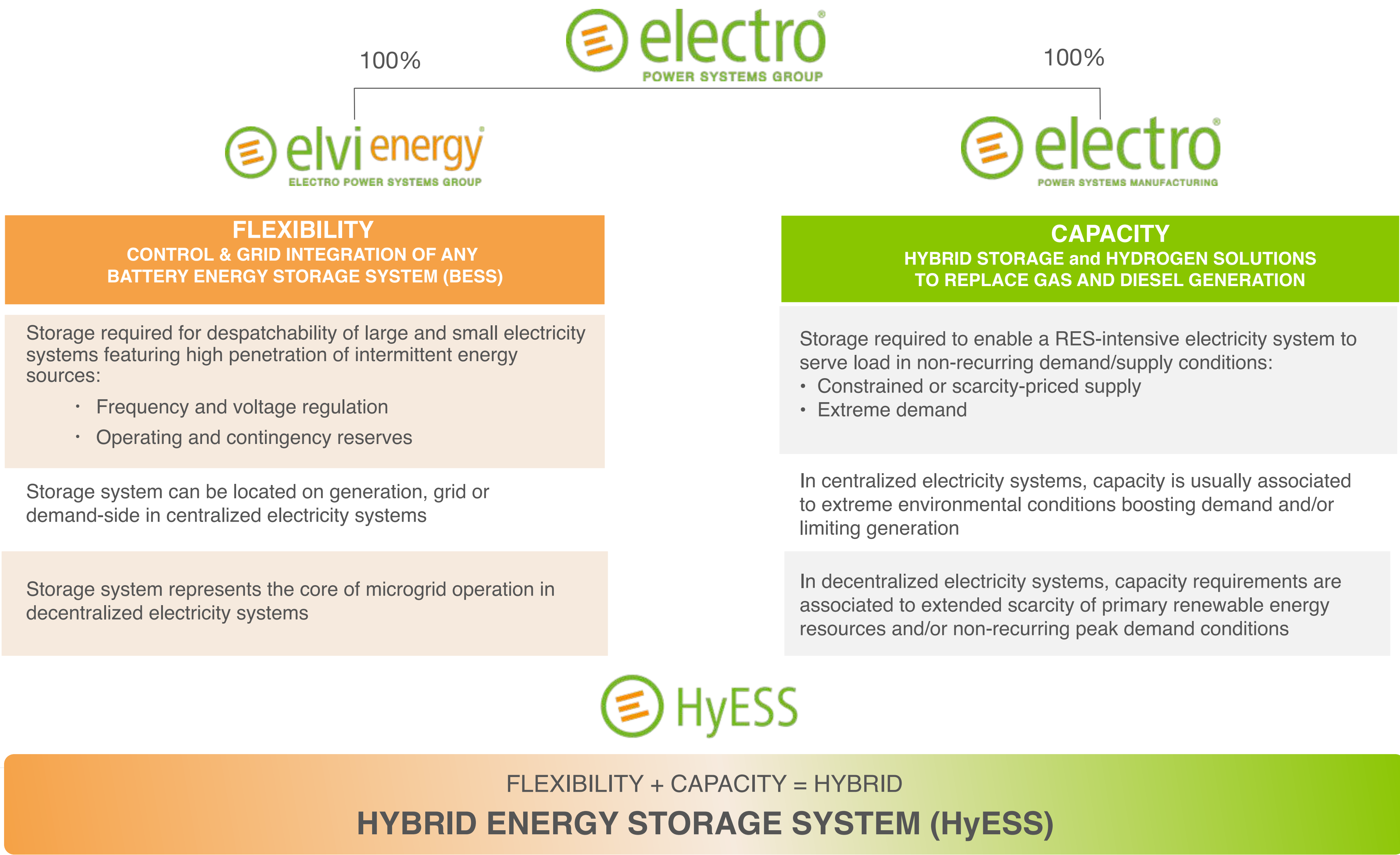
Our Mission

We **unlock the energy transition**, mastering the intermittency of renewable energy sources. We advocate competitive and **technology-neutral energy and emission markets**. Through the seamless integration of the best battery technologies, and our hydrogen and oxygen platform for long autonomy, **we enable renewable energies to power society**: reliably, affordably and sustainably.

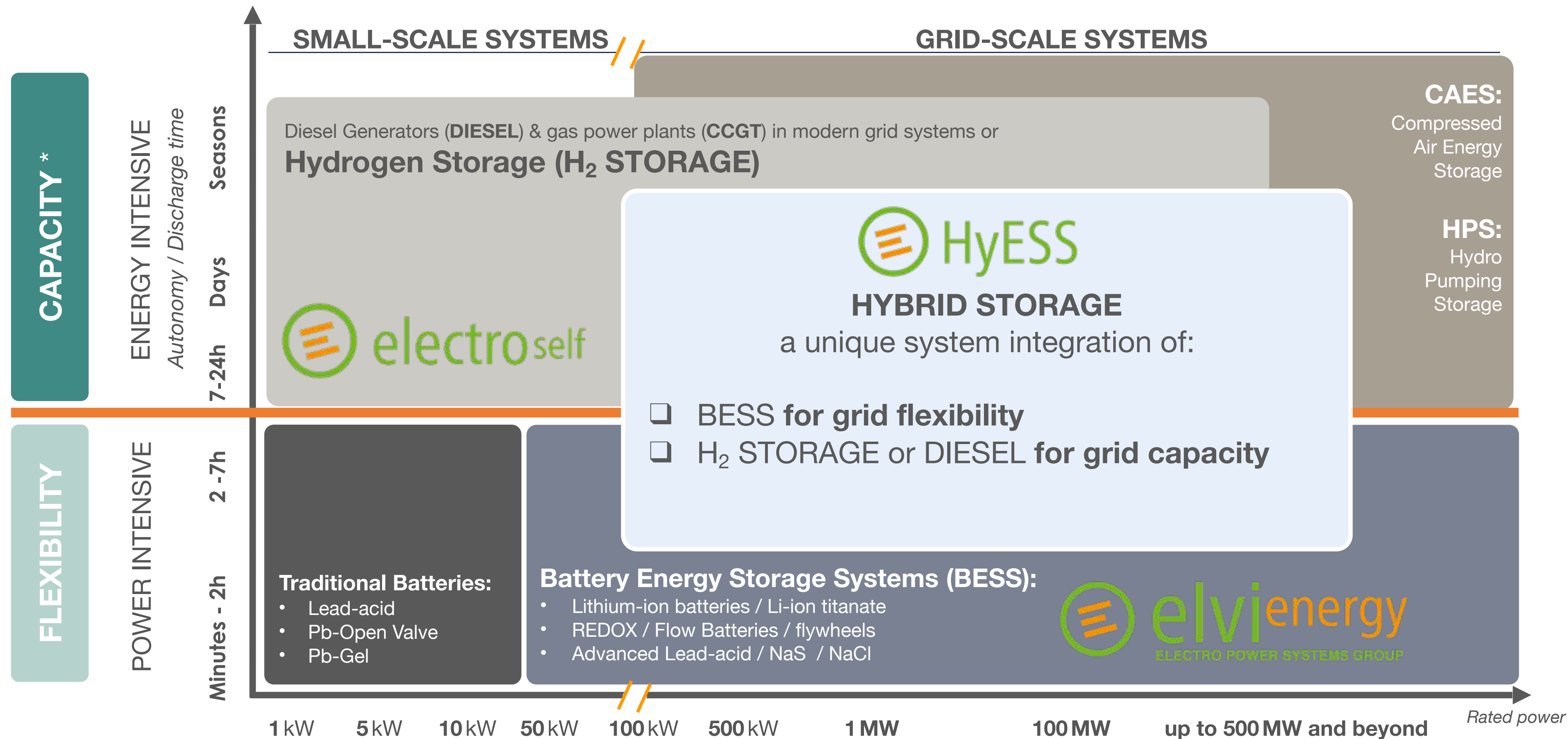
Storage is the global challenge of the Energy Transition: a mega-trend



A technology-neutral approach: a technology group with two business units

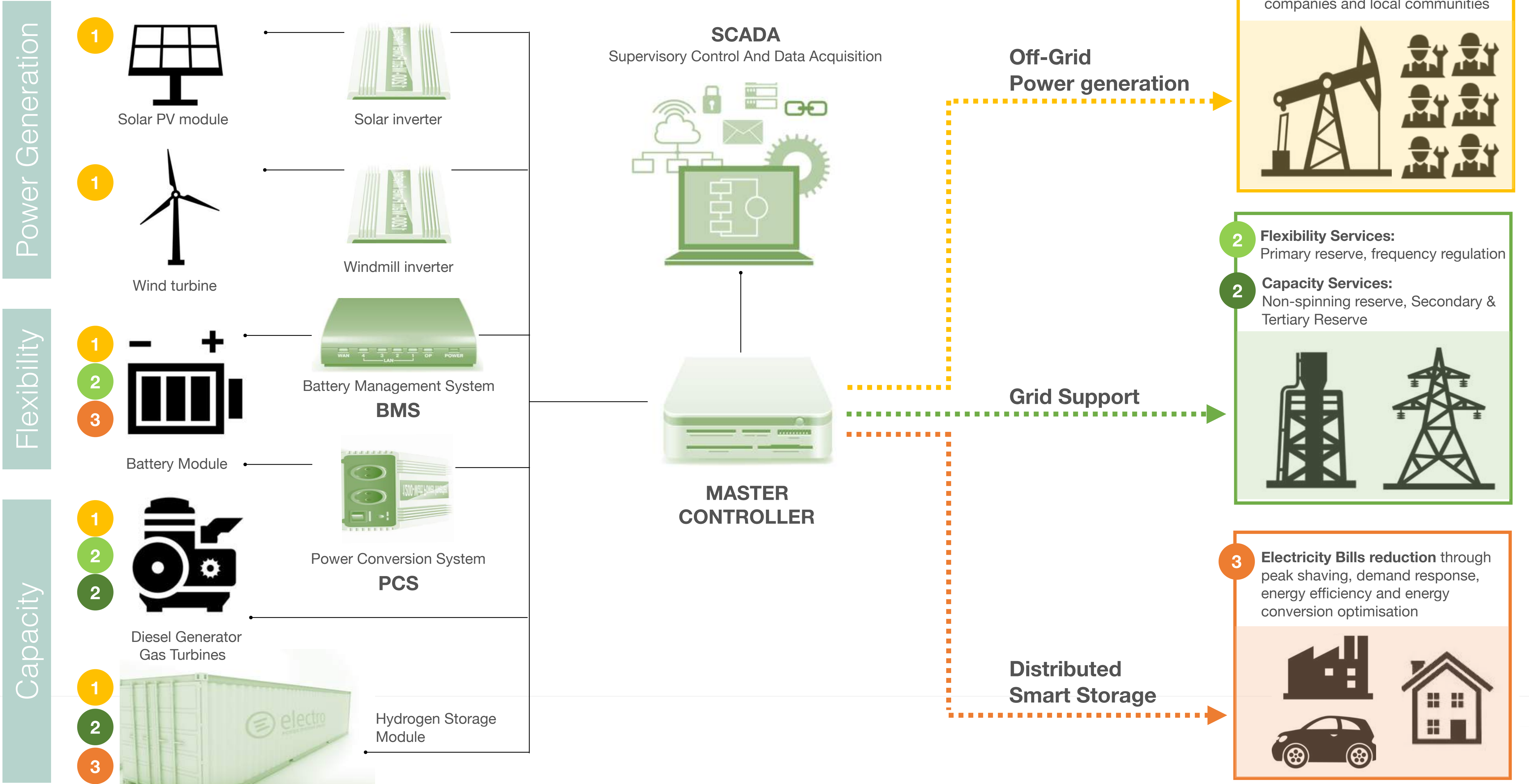


Positioning: hybrid solutions represent the core of any storage need

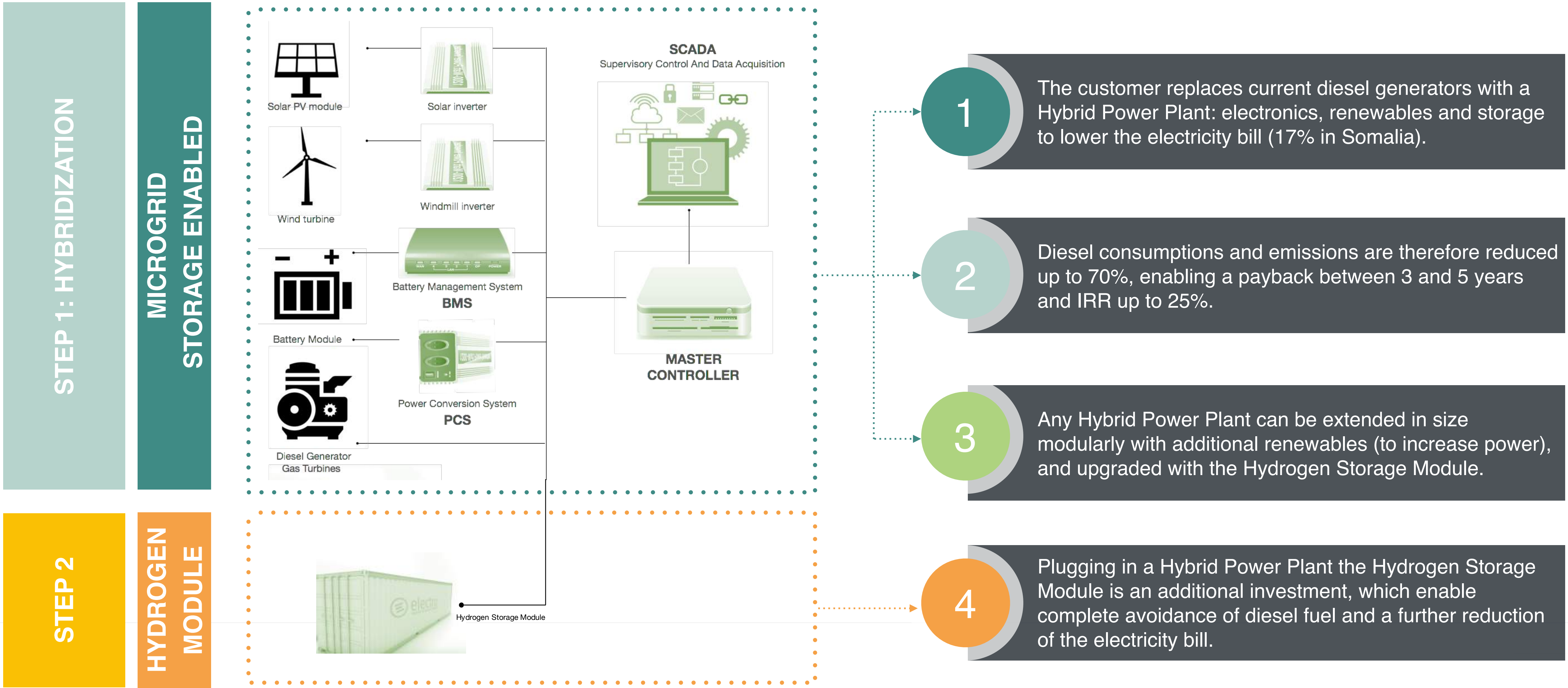


* Pure Energy Applications (which cannot be classified as a flexibility or capacity application), aimed at regularly time-shift energy, have not been represented as not profitable in current market environment.

What we do as a “Vertically Integrated Energy Storage Company”



Full Diesel Replacement: a two-step business model



Our Markets: focus on profitable and unsubsidized business verticals



Grid Support



Distributed Smart Storage



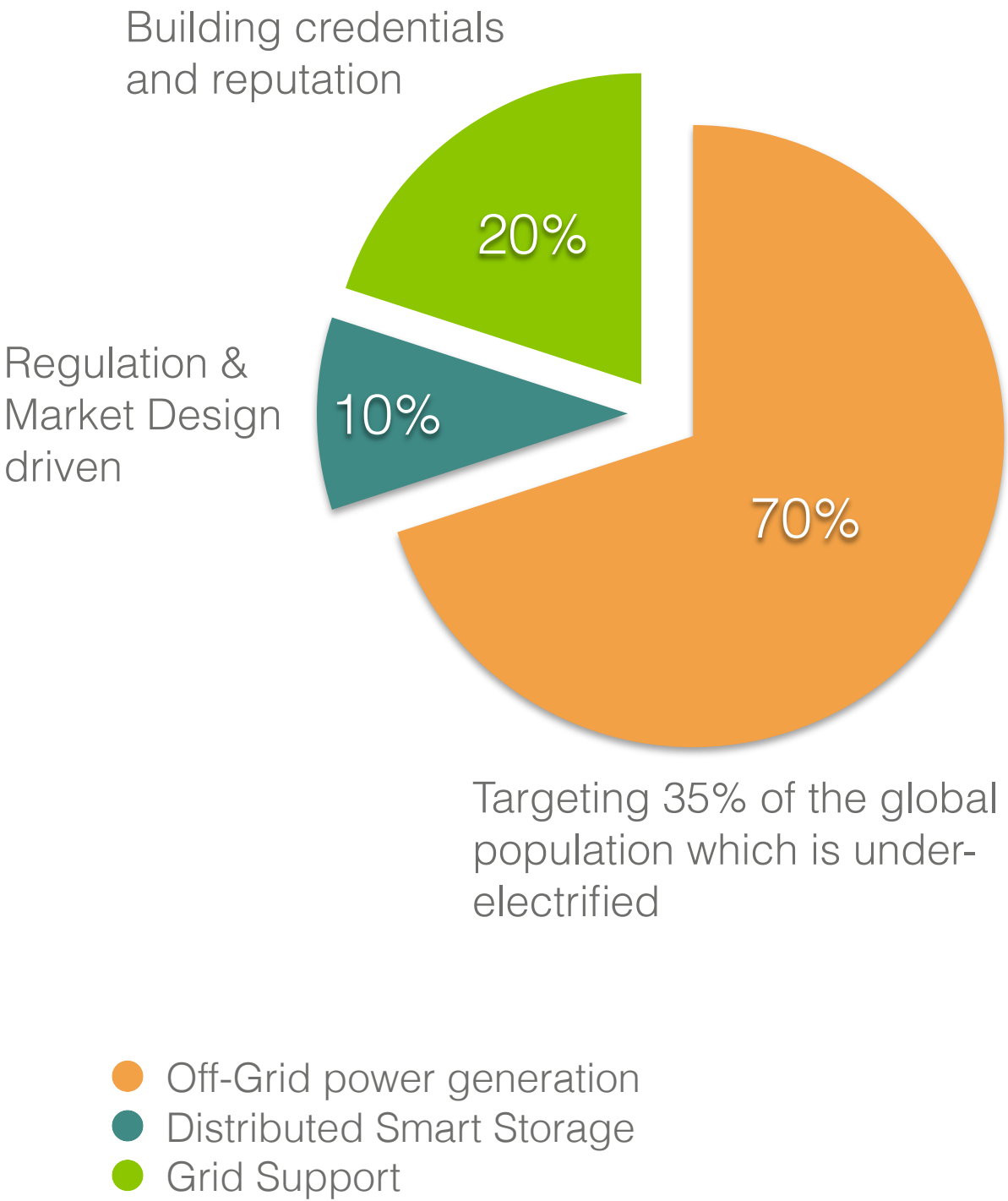
Off-Grid power generation

We provide grid operators and renewable energy players with **integrated storage solutions to master the intermittency of renewables**, and address the burgeoning demand for primary, secondary and tertiary reserve, reactive power and black-start capabilities, at a lower cost for consumers, **cutting electricity bills**.

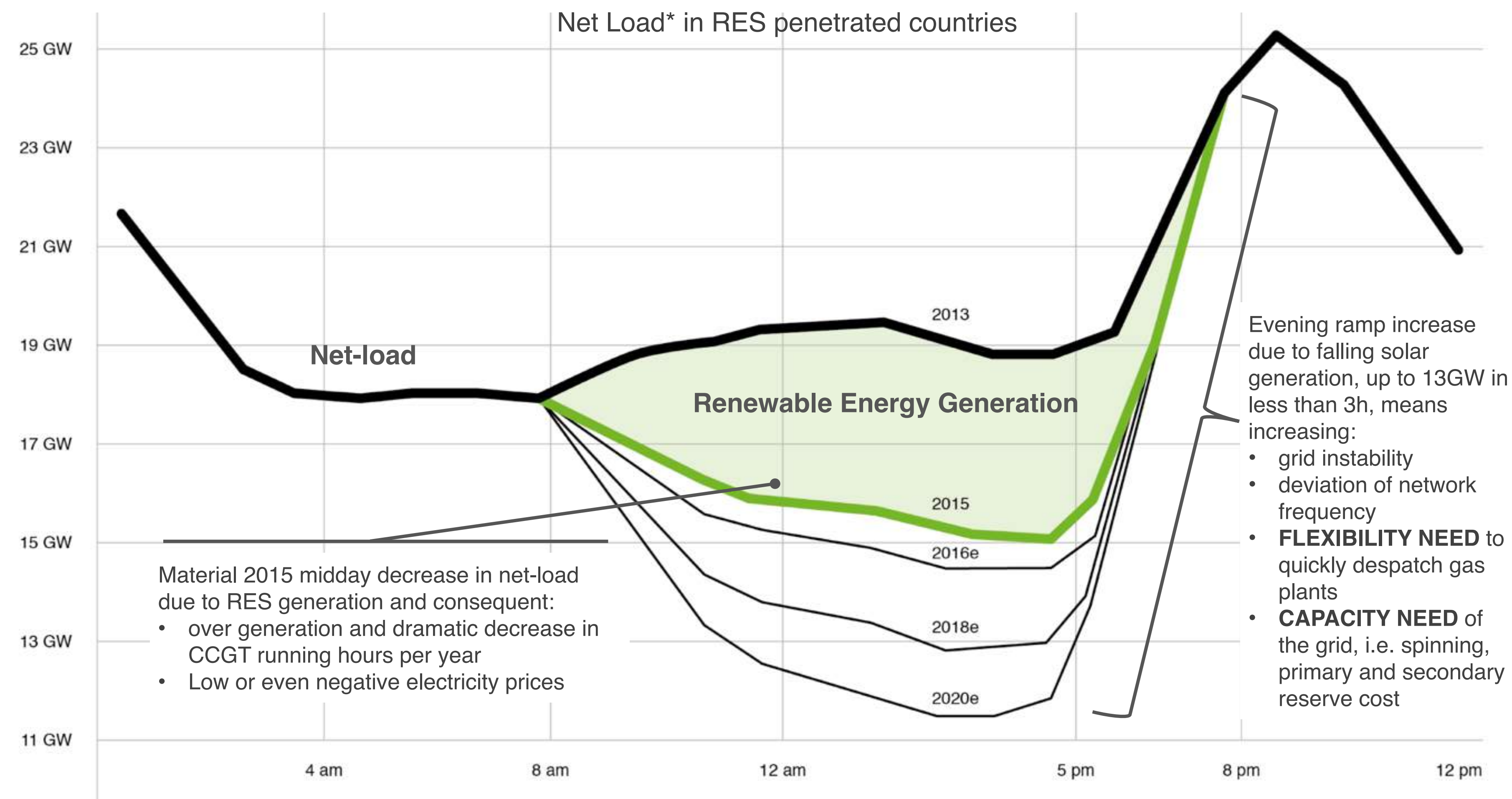
With behind-the-meter storage, we compress energy bills, by **peak-shaving the consumption profile of commercial and industrial users**, optimizing the utilization of distributed generation, enabling participation in demand response schemes, and delivering sustainable back-up power.

We enable **renewables as a reliable and affordable stand-alone power source** in emerging markets, displacing diesel and oil-fired generation. We foster a bottom-up, decentralized model of greenfield electrification, providing **clean energy 24/7 at cost lower than diesel generation**, the only alternative in such areas.

EPS Resources allocation and long term growth expectations

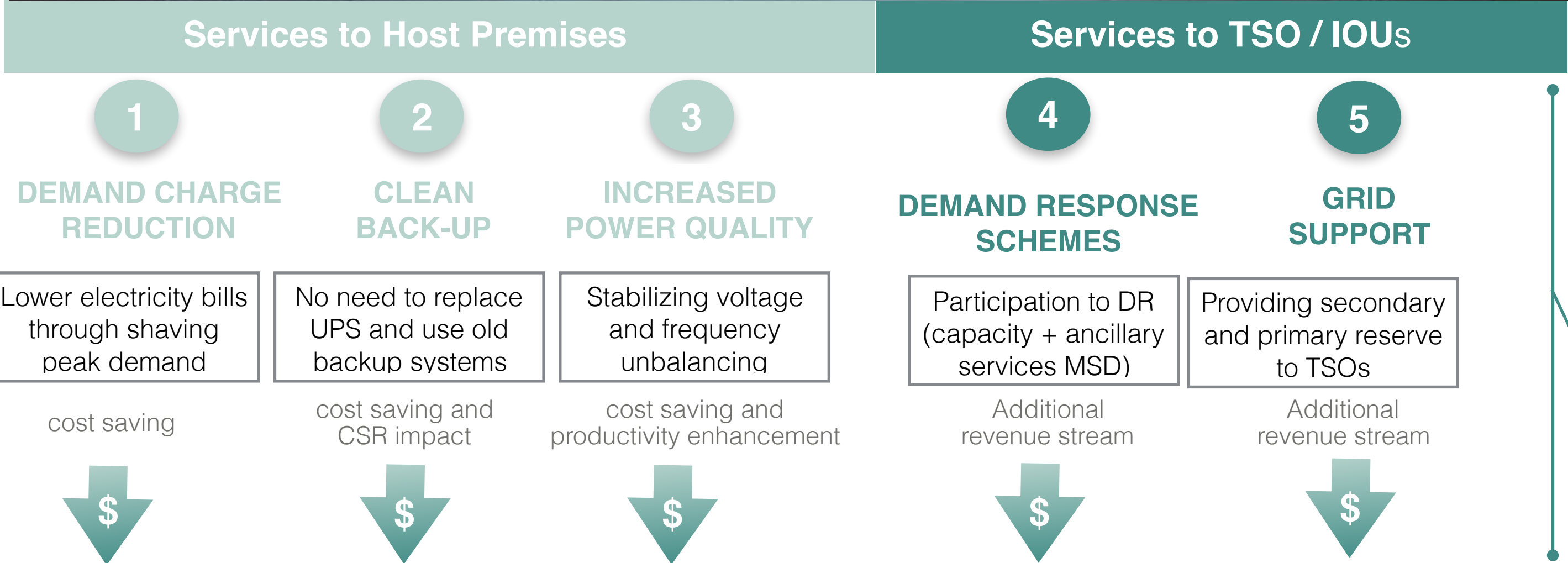


Renewables penetrated countries need Grid Support



* **Net Load** means the difference between the forecasted load and expected electricity production from RES. The Graph shows the net-load in a typical March day in California

Behind-the-meter storage to provide services to both industrial customers and TSOs



When installed in industrial plants, storage technologies can:

- dramatically reduce energy costs, particularly when coupled with renewables
- increase power quality and reducing manufacturing process constraints
- enhance backup capabilities in case of grid disruption
- generate revenues by using installed storage systems to provide to grid operators services

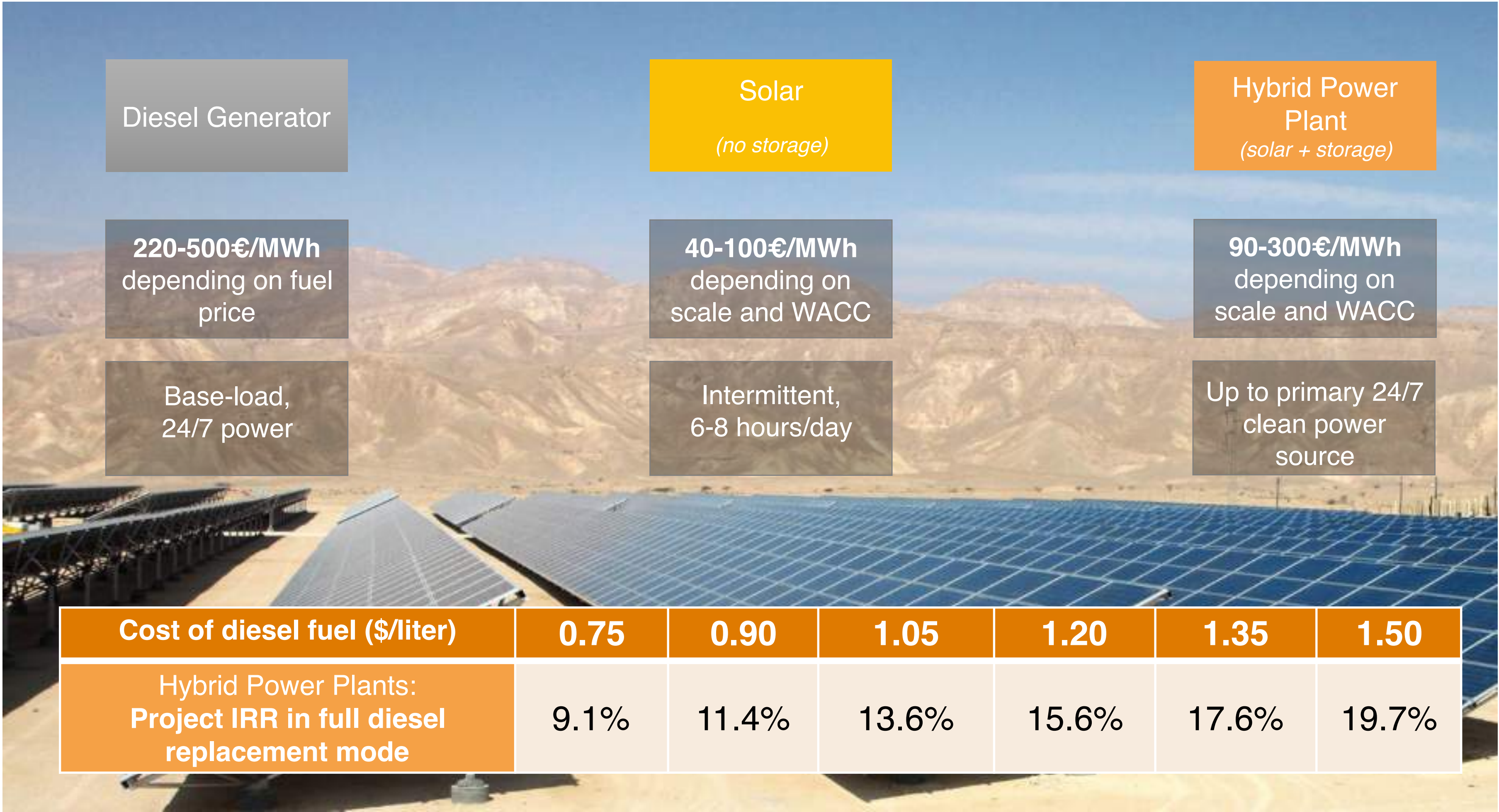
Energy Storage used to provide such “*behind-the-meter*” services is already competitive on a unsubsidized basis, and

any investment to provide such services can generate returns up to 25% IRR.

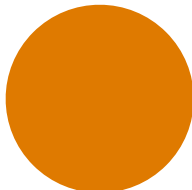


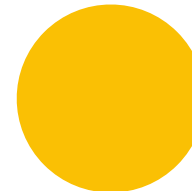
We reduce electricity cost in under-electrified areas

 HyESS + Solar = Hybrid Power Plants



Solar is the cheapest source of energy but it is intermittent and available few hours per day. As a result, this is neither the solution for off-grid areas that need 24/7 power, nor can support unreliable grids subject to outages and instability issues. Hybrid Power Plants transform RES into a 24/7 reliable power source at a cost lower than any alternative in the market today.

 **600GW**
Installed fleet of diesel generation
300GW running over-the-clock at full load

 **200Mio tons CO₂**
annual emissions potential reduction with Hybrid Power Plants

Group installed base



Flexibility

Control and system integration of any BESS

Capacity

Hybrid Storage

21 countries

Covered by our installations

100,000+

People powered by our hybrid solutions

44.3 MWh

Aggregated energy storage installed or under commissioning

21.1 MW

Aggregate power output installed or under commissioning

EPS Group’s companies (Elvi Energy, MCM, and Electro Power Systems) have strong references and developed systems, projects and analysis for:



TOSHIBA



Flexibility: proprietary vertically integrated technology

We developed and engineered an energy storage system which integrates in one single integrated system:

- **PCS:** a unique Power Conversion Systems with **DROOP Technology** with modular power range: 20, 35, 70, 125, 250, 1000 kVA
- **BMS:** Battery Management Systems for all available storage technologies
- **BMC:** BESS Master Controllers with **BlackStart Function**
- **MGC:** Micro Grid Controllers
- **EMS:** Energy Management Systems
- **SCADA*:** for Power Plants and Virtual Power Plants



Flexibility

Control and system integration of any BESS

2%

Global market share in 2014

8.7 MW

Hybrid power plants installed or under commissioning

9.4 MW

Battery technology integrated or under commissioning

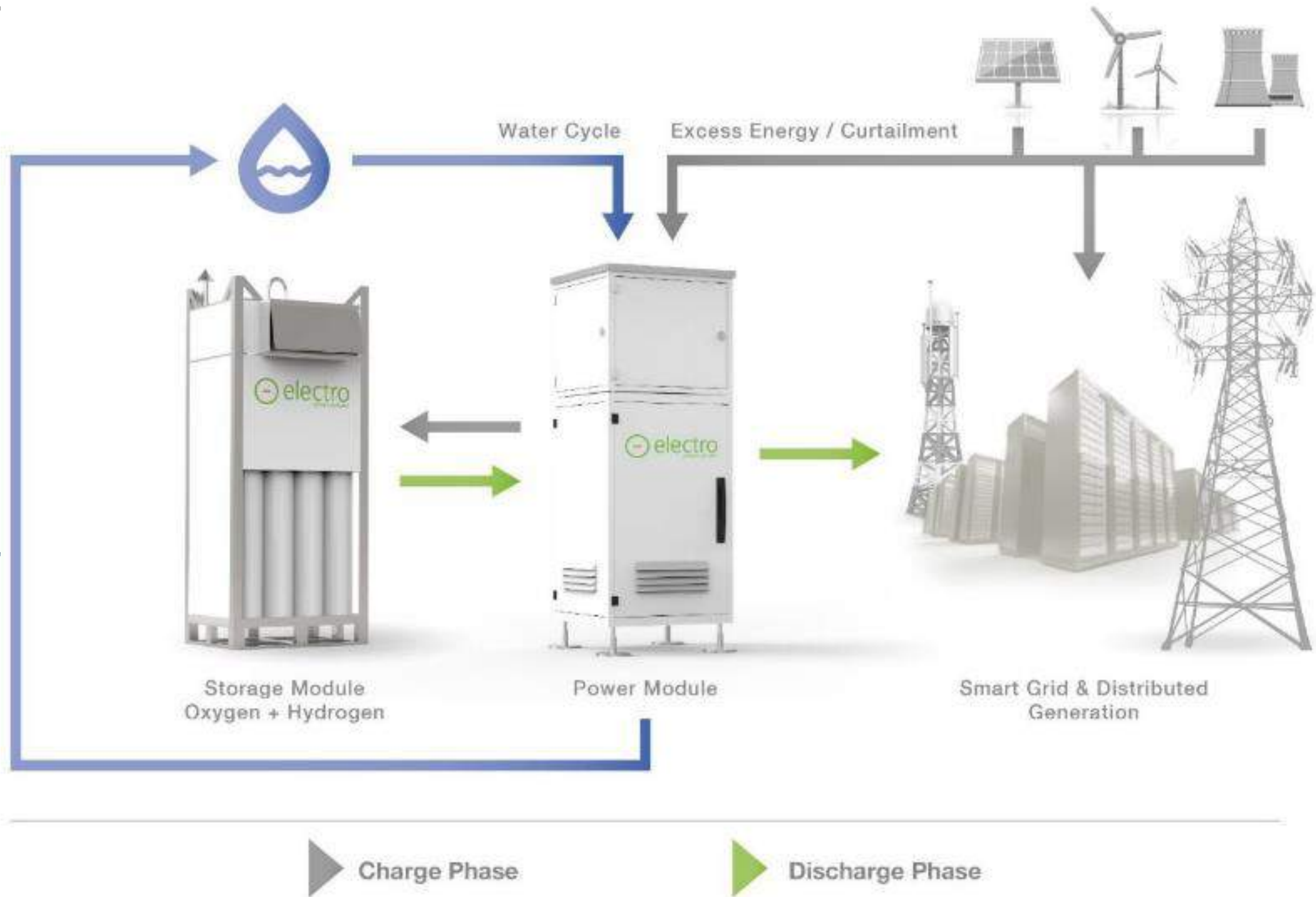
Sole technology in Italy certified to install storage in MT networks from 1 Jan. 2016
CEI 016 All. N-bis



* Supervisory, Control and Data Acquisition Systems

Capacity: like a diesel generator with a lower generation cost.
Fuelled by water, but 30% more efficient

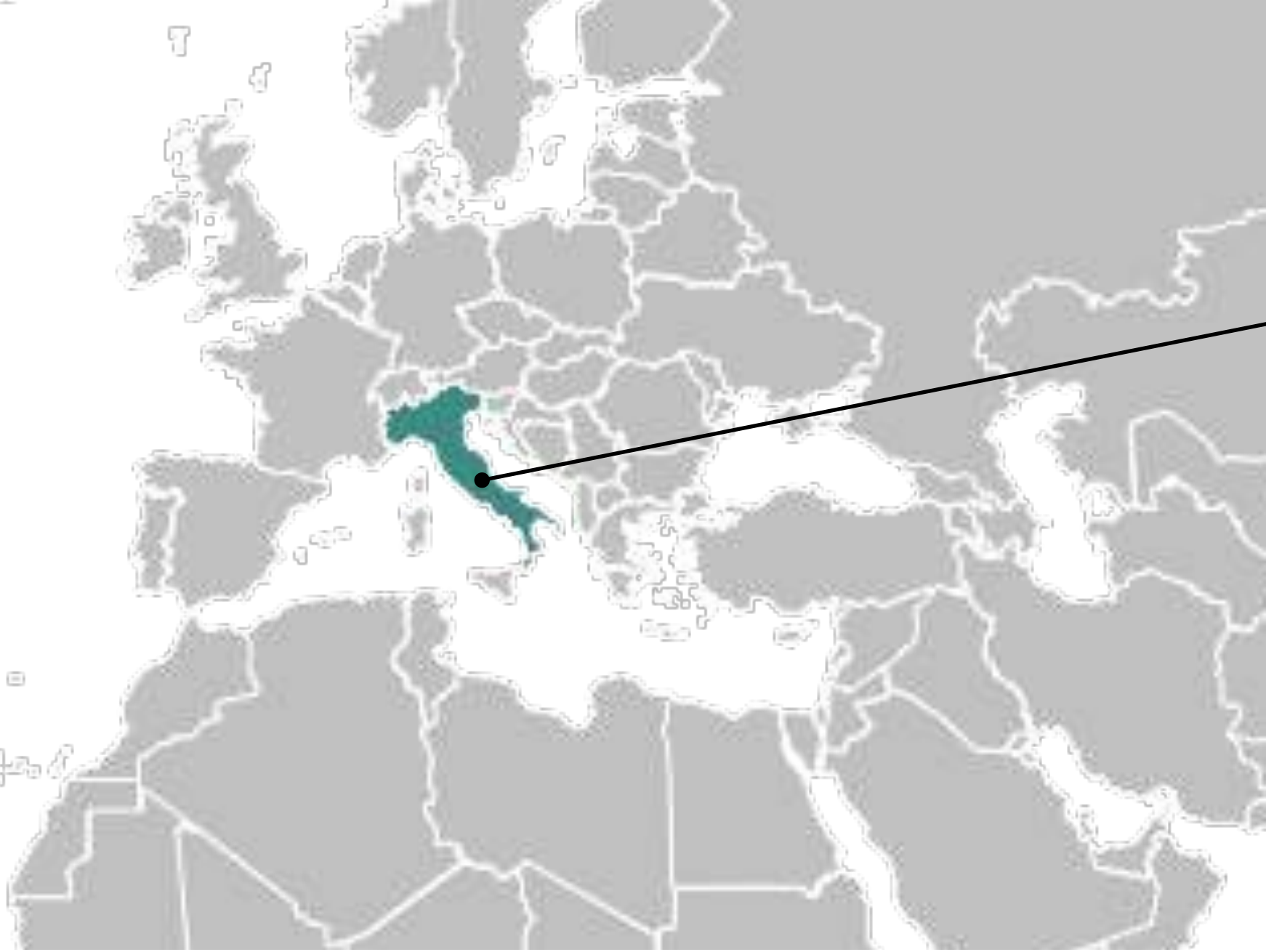
Capacity
H2 and Hybrid Storage



125
Cleantech patents and applications in 48 countries.
Unique generator running with water only

3MW
Hydrogen systems power output utilized in aggregate

607
Systems installed devoted mainly to mission critical applications and telcos



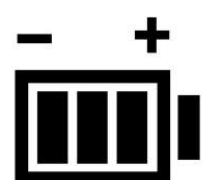
Customer:



Final User:



Grid Support System:

 Storage: 1MVA/2MWh
(Li-ion titanate technology)



BESS Master Controller
Black Start Function
200,000h development

 Smart MV Switchgear



Power Conversion: 1MVA
No. 4 C-BESS 250kW,
DROOP Control Technology

Terna Plus is engaged in the development and implementation of storage system projects for the transmission grid.
This program consists of two macro-projects (“Energy intensive” and “Power intensive”) and plans the installation of different types of systems with technological features that meet the needs of functions and services to be provided.

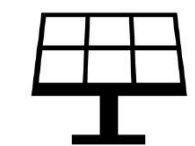
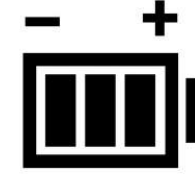




Customer:



Hybrid Power Plant:

	PV: 1MW		Electricity Bill reduction: 17%
	Wind: 450kW		Diesel reduction: 25%
	Storage: 700kWh		Power Distribution Board
	DG: 3.25MW		MV distribution to end-user
			Peak Load: 3.5MW
			People: 100,000

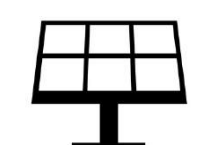
The Hybrid Power Plant, awarded by NECSOM (National Electric Corporation of Somalia) involved the engineering, supply and installation of a renewable and storage turnkey solution that allows the reduction of diesel consumption by more than 2,000 litres per day.

The Hybrid Power Plant serves a 3.5MW load, and is expected to be shortly further extended with 450kW of wind energy, covering with renewables and storage more than 25% of the energy need of the city. Situated in North-East of Somalia, Garowe is the administrative capital of the autonomous Puntland region and a fast-growing city, which has also evolved into a local media and cultural hub.



Customer:
TOSHIBA

Hybrid Power Plant:

 PV: 3MW

 Wind: 2MW

 Storage: 1MW/250kWh

 DG: 6MW

 Demand: 3MW
(average load)

 Power Conversion: 3MW
(peak load)

 Diesel reduction: 70%

Many remote Australian communities relying on diesel generators, expensive to run and vulnerable to the volatility of fuel prices.

Prior to the installation of the Hybrid Power Plant this iconic mining town in South Australia was entirely relying on diesel generation.

The Hybrid Power Plant, whose construction will be carried out starting from September 2016, will provide the mining site and its below-ground residences, with approximately 70% renewable energy over the 20 year life of the project.



Our commitment to technology excellence:
125 patents in 48 countries, 500+ industrial secrets, international awards

Ilaria Rosso
Co-founder and Chief Innovation Officer



Carla Alberto Guglielminotti
Chief Executive Officer



Host in 2015 world's most influent energy workshops: Brazil, USA, Singapore, China, Europe

Worldwide Technology Pioneer, Future of Electricity, selected within the 100 cleanest innovators worldwide



Our commitment to the market:
Listed on the Paris Stock Exchange, and certified worldwide



2015 listed on the regulated market

NYSE Euronext
to start global sale
(EPS:PA)



ISO9001, 14001,
OHSAS,
CEI certified

Full commercial product
offer certified in USA,
Canada, EU and China



Our Commitment as a management team: Solid technology, innovation and energy background



**Carlalberto
Guglielminotti**

Chief Executive Officer



10y experience in growing technology companies, startup, restructuring and turnarounds.



**Giuseppe
Artizzu**

Executive Director
Global Energy Strategy



16y experience in energy strategies and markets, 10 with the Lehman Energy Division as ED.



**Daniele
Rosati**

Executive Vice President
Engineering



PhD, 10y experience in the most complex hybrid power generation project worldwide



**Paolo
Bonetti**

Chief Financial Officer



22y experience in finance, operation and technology, private equity, and venture capital.



**Ilaria
Rosso**

Chief Innovation Officer
and Co-founder



PhD, 50 publications, 16y experience in efficient innovation processes with major EU operators and policymakers



**Paolo
Morandi**

Chief Operating Officer



40y experience as CEO, COO, and manager in major energy and automation operators



**Gabriele
Marchegiani**

Senior Vice President
Energy Solutions

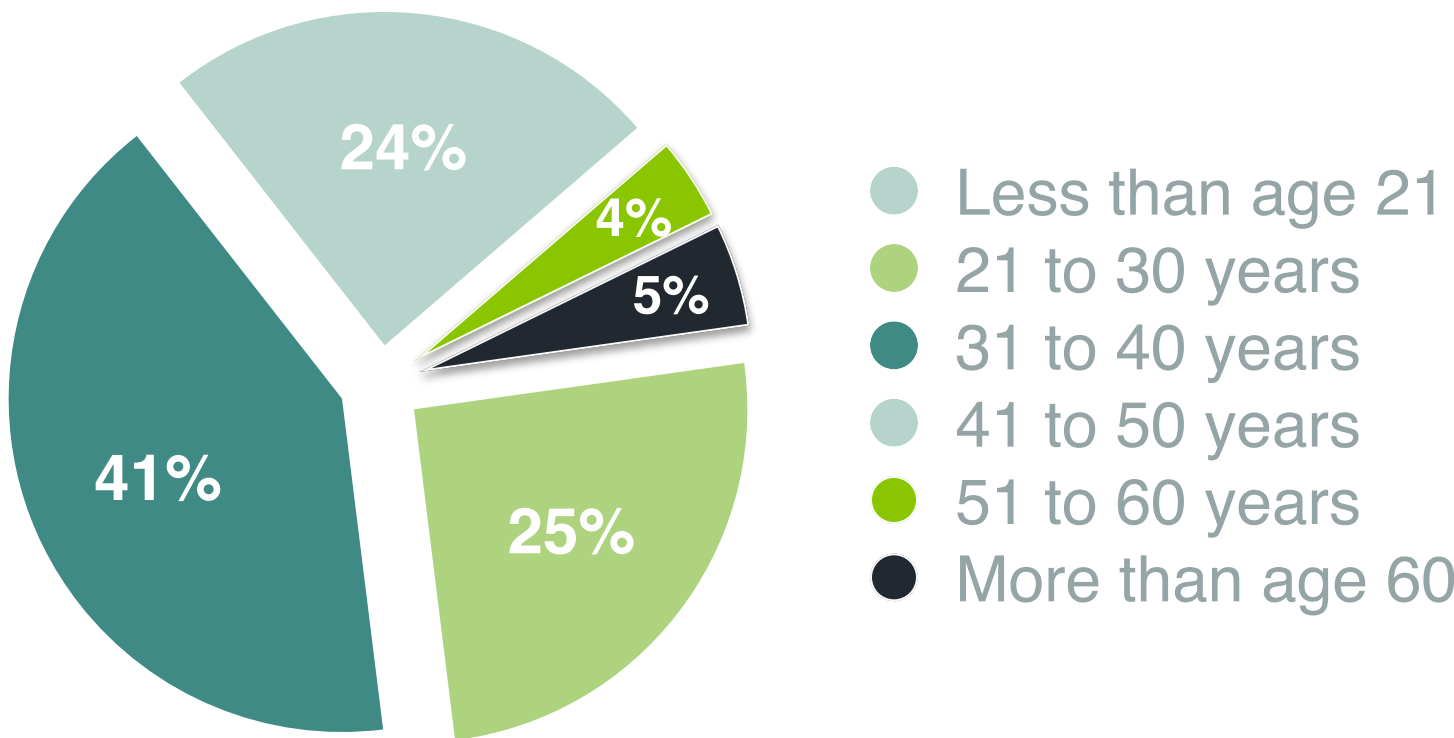


35y experience as entrepreneur and veteran in the field of magnetics, power electronics and renewable energies

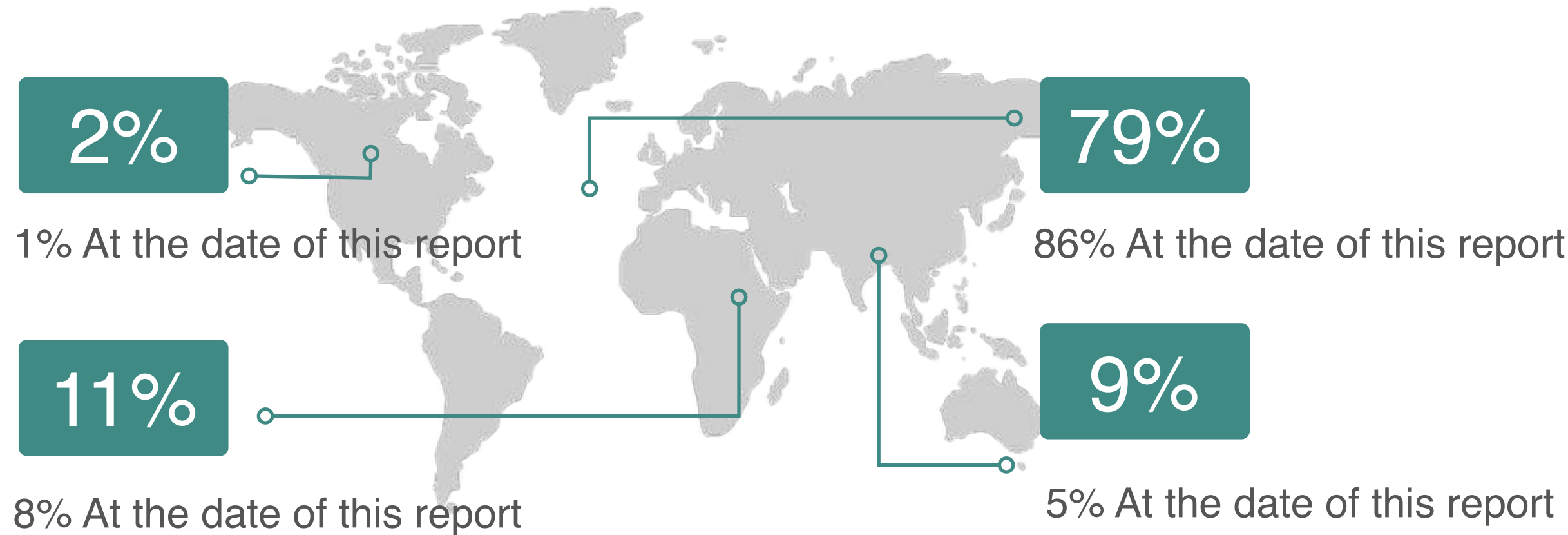


Our commitment to people excellence

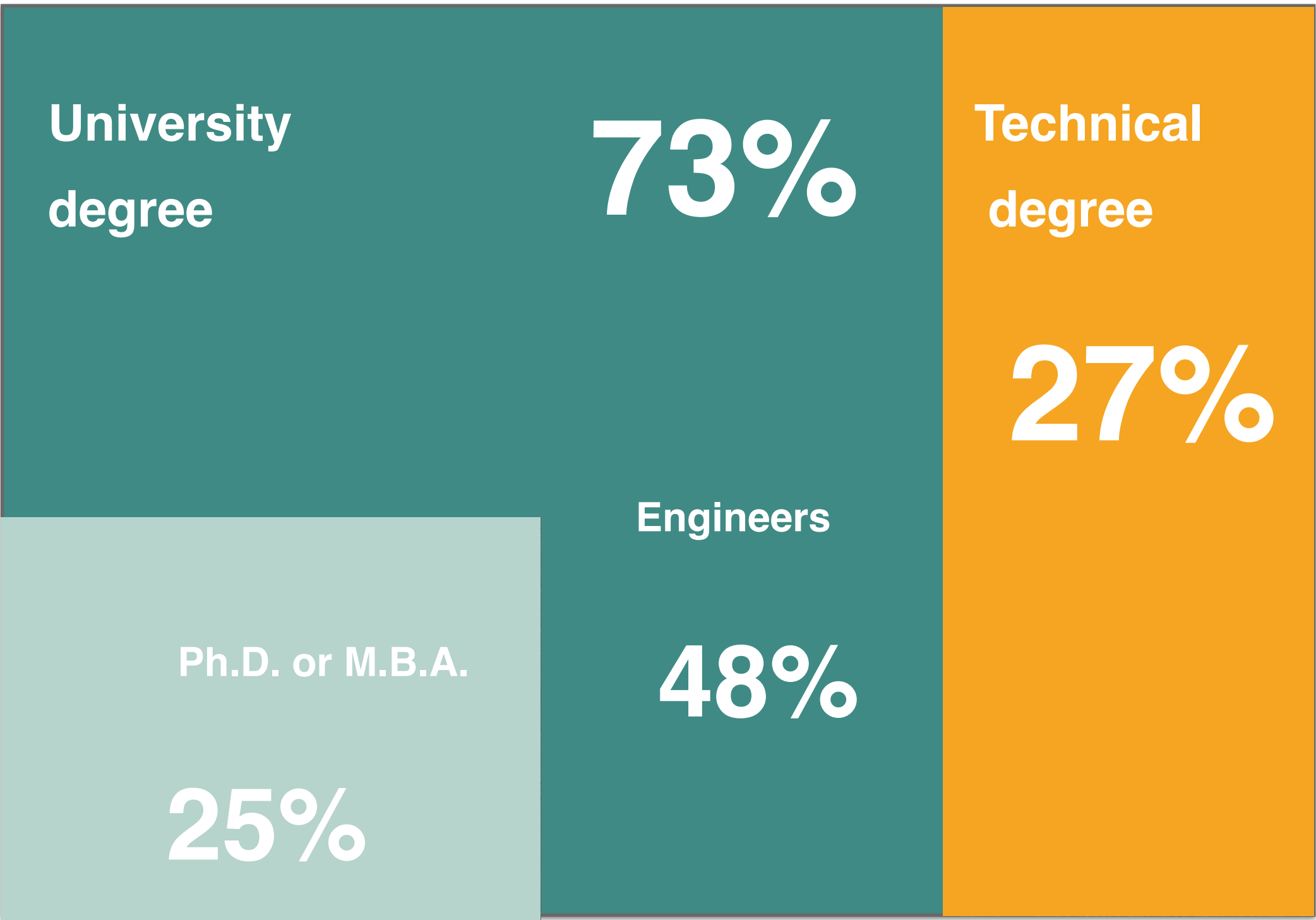
Human resources by age group



Headcount of the Group resources by geographical area



Human resources by degree



Our commitment to Italian manufacturing

Manufacturing consolidation

Launched in
December 2015

- 1 Efficient energy and lighting solutions, reduced CO₂ emissions and **4.6kW maximum peak**
- 2 The most advanced research center for hydrogen applications
- 3 3,500sqm 2MW/month manufacturing capacity



Headquarters (Milan, Italy)



R&D & Manufacturing (Turin, Italy)



System Integration (Delebio, Italy)



an Energy Company with a clear Mission

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Carla Alberto Guglielminotti, Chief Executive Officer

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