

# **Enhanced Energy Performance Contracting The NOVICE Project**

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## **Setting the Scene**

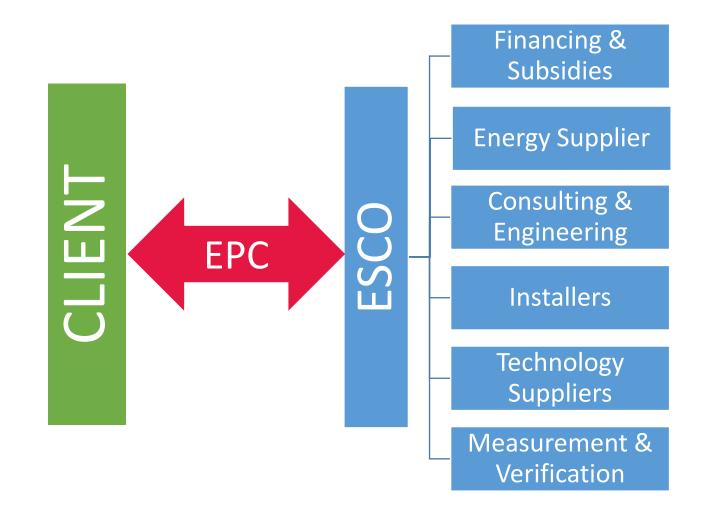
- The EU has an energy efficiency target of 32.5% improvement by 2030.
- Buildings account for 40% of energy consumption in Europe. 75% of the buildings stock is energy inefficient but renovation rates are only at around 1% per year.
- 'Smart' buildings that can respond to the needs of the occupants and the grid are needed.
- To hit the EU's 2030 targets, €177 billion per year of private finance will be necessary over the period 2021-2030.



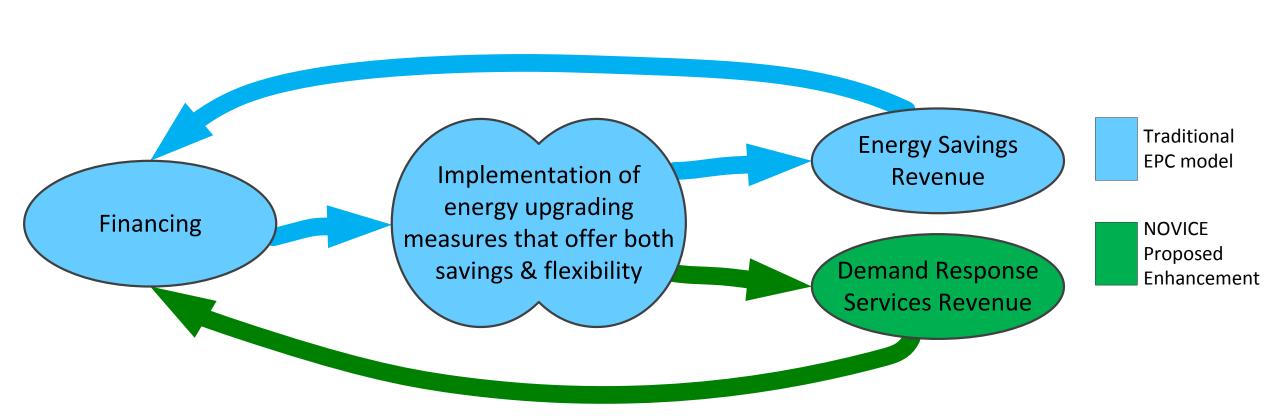
## Why EPCs?

Energy Performance Contracts (EPCs) have many advantages:

- Client does not require upfront capital.
- Finance for the project is provided by the ESCO or a third party finance provider.
- Energy Savings are guaranteed by the ESCO, removing the operational risk from client.
- The loan is repaid from the savings on energy bills.
- Single contract between client and ESCO covers all energy efficiency measures.
- Deeper renovations can be achieved through taking a whole building approach.

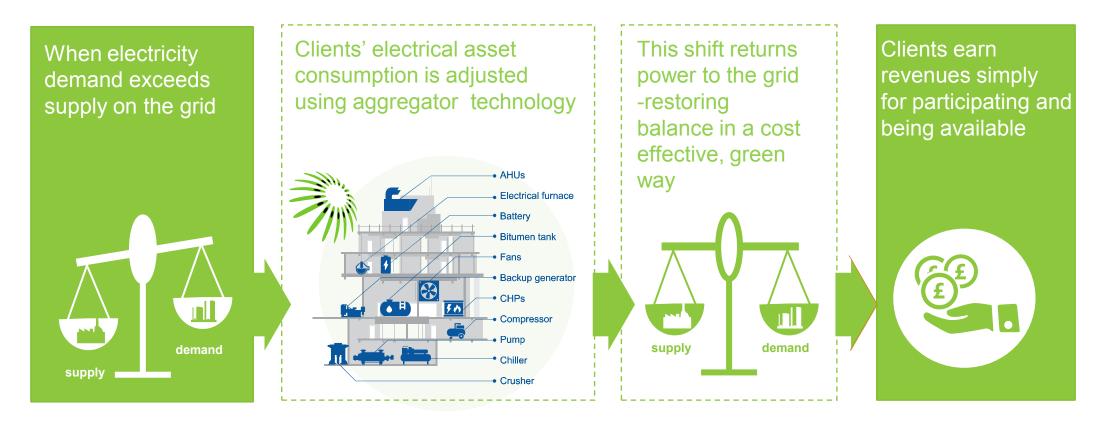


# **NOVICE** in a Nutshell: An Enhanced EPC



# What is demand response?

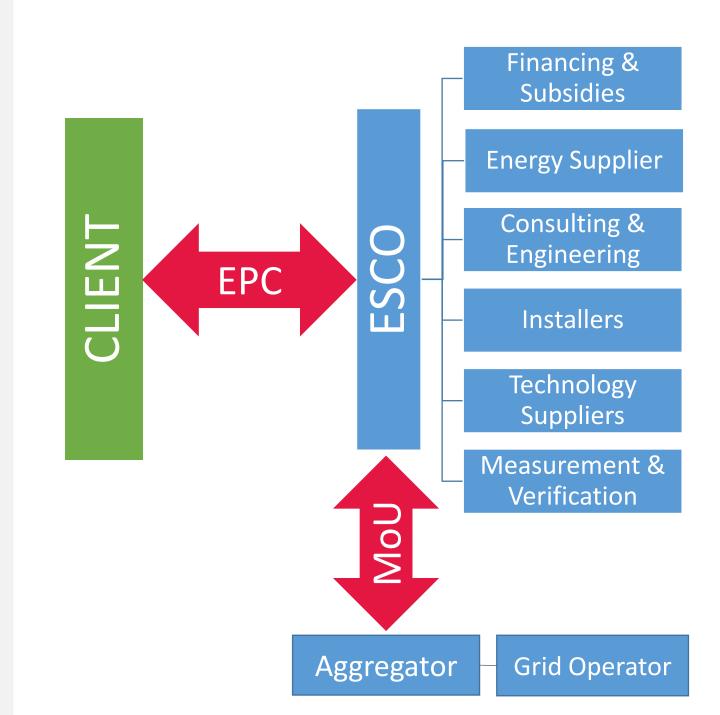
Demand response is a way of shifting or reducing electricity usage during peak periods.



#### **NOVICE Enhanced EPCs**

#### How do they work?

- NOVICE project is looking at an Enhanced EPC business model for ESCOs.
- It considers demand response as well as energy efficiency measures
- This creates a dual revenue stream one from energy efficiency, another from demand response.
- The ESCO remains the single point of contact for all measures but uses the services of a demand response aggregator to provide services to the grid.
- A Memorandum of Understanding (MoU) governs the relationship between ESCO and Aggregator

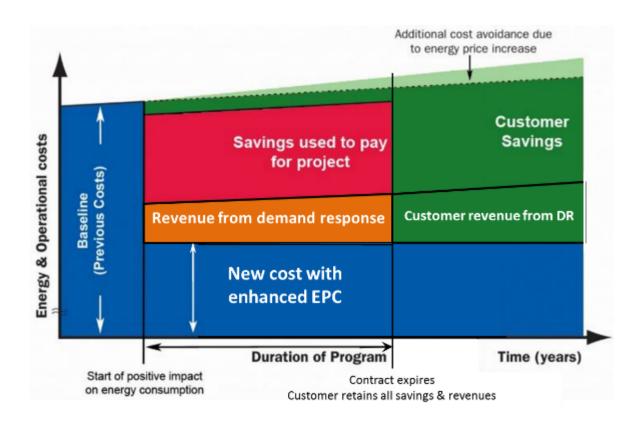


# **Traditional EPC vs Enhanced EPC finance**

#### **Traditional**

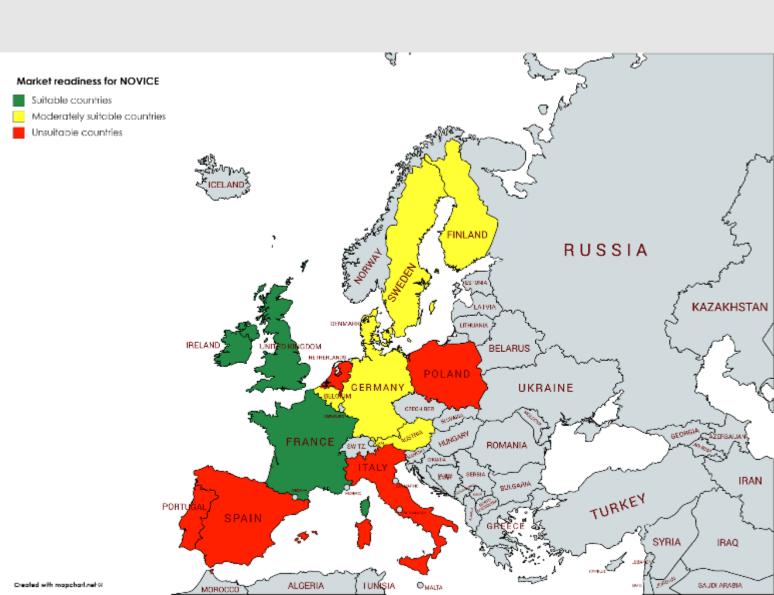
#### Additional cost avoidance due to energy price increase Customer Energy & Operational costs Savings used to pay Savings for project Baseline (Previous Costs) New, reduced costs with performance contracting **Duration of Program** Time (years) Start of positive impact Contract expires on energy consumption Customer retains all savings

#### **Enhanced**



# **Assessment of Market Readiness for NOVICE**

- Market readiness for NOVICE varies across the EU.
- Green countries have well developed or growing ESCO markets and several open DR markets with regulation that encourages aggregators to participate.
- Yellow countries have either an advanced ESCO or an open DR market but strict regulations that limit the ability of aggregators to participate.
- Red countries either have immature ESCO and closed DR markets or do not legally allow aggregation.



# **Benefits of the NOVICE Enhanced EPC**

#### **ESCOs & Aggregators**

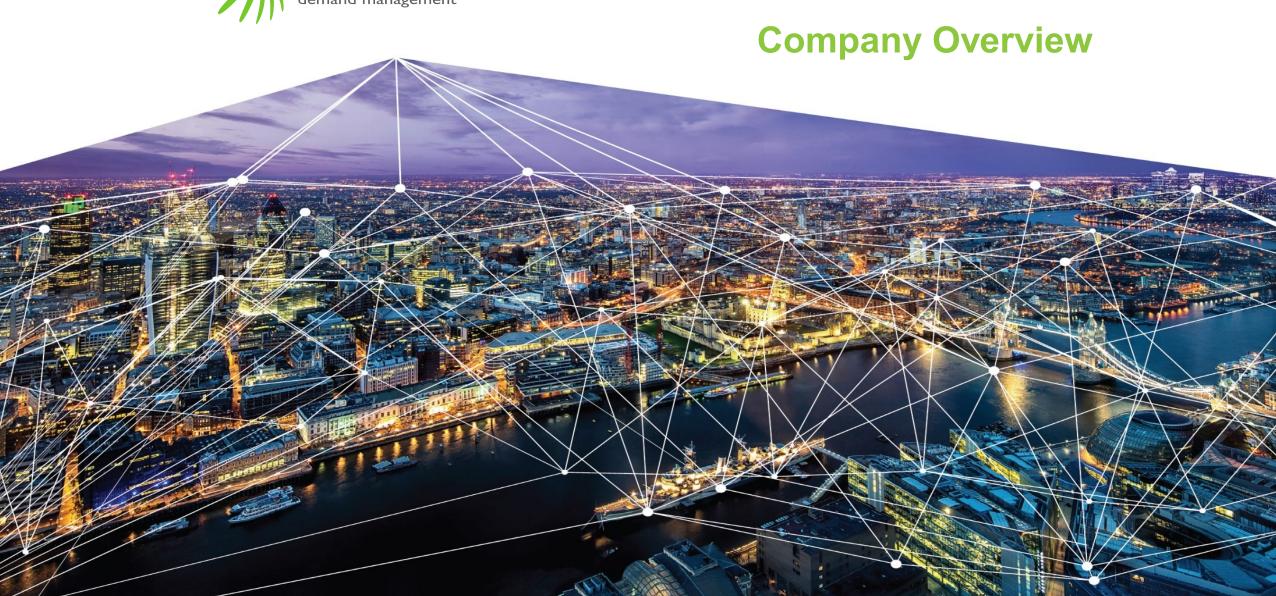
- USP in a crowded market
- Access to new markets
- Short contract lengths
- Improved ROI
- Ability to finance more projects
- Low risk way to bring new skills to the business

#### **Building Owner**

- Faster payback period
- Shorter contract duration
- Smart building
- Improved occupant comfort
- Increased asset value
- Reduced administrative burden

Increased Renovation Rates







#### Who we are

We are an Energy Technology company

We provide products to monitor, control, aggregate, optimise and monetise DER assets We partner with you to build your business

1GW+ of DERs are managed on our platform

We are active in 10+ countries

There's 70 of us - more than 35% being technologists

We built our technology platform in house

Smallest asset on platform is an HVAC unit (4kW), largest a gas turbine (46MW) 70MW of battery systems are managed on our platform



## Customer Needs & How KiWi can help

In response to the rapidly changing energy markets, various market participants require a technology solution capable of managing distributed energy resources in real-time, at scale.

#### Typical customers types are:

- Electricity suppliers
- Vertically integrated utilities / monopolies
- DNOs / DSOs
- Independent aggregators, energy services managers, microgrid operators, etc

# KiWi Power's Platform-as-a-Service offering is the most reliable, flexible and lowest-cost solution to build your DER business

Using our platform, our customers can focus on their clients & markets, rather than having to make large upfront risky investments in infrastructure and technology development.



# Our offering to partners

KiWi Power provides products to manage DER assets and monetise them in the markets:

#### **DER Management**

The "classic" DR aggregation offering, enabling to control, aggregate, optimise DERs and monetise them in the markets (typically ancillary services, trading and peak load)

#### Battery Energy Storage System Management

A full EMS control system to manage energy storage sites, including frequency control, metering, monitoring sec-by-sec cycle times, State-of-Charge management, alarms, data dashboard and bidding into the markets (typically primary frequency control, trading, peak load)

#### **Grid Constraint Management**

Comprehensive solution for (DNO) grid operators to tender for, aggregate and dispatch DER assets on their networks

Revenue Streams

Constraint Management

Peak Load

**End User** 

KiWi Products

DER **Management** 

**BESS Management** 

Grid Constraint **Management** 

Software

Real-Time Big Data

Reporting &

Integration

Hardware

Low Cost

DER Assets

KiWi DERMS Platform













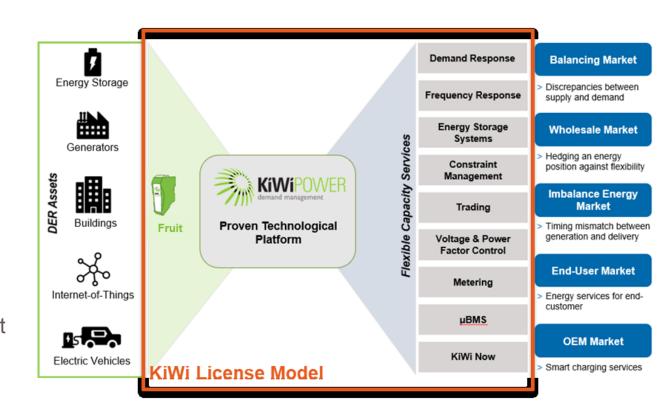




## We cooperate with partners

#### ➤ Product Licenses (B2B2C)

- Platform-as-a-Service
- KiWi brings technology and DER know how for free
- KiWi provides hardware for free
- Typical partners are electric utilities
- Solution is white-labelled in partner's name
- Partner sells to end customers
- Partner operates the business and is local market expert
- KiWi and partner share revenues to align incentives





# Thank you

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