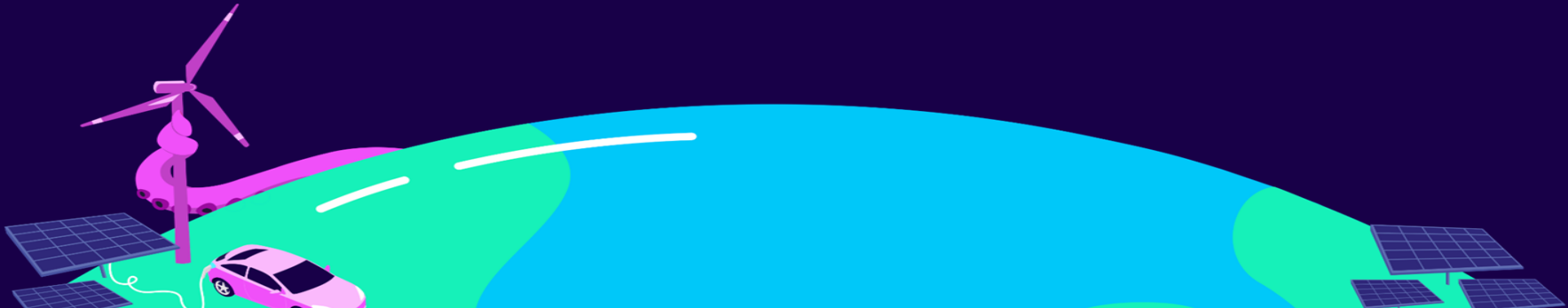


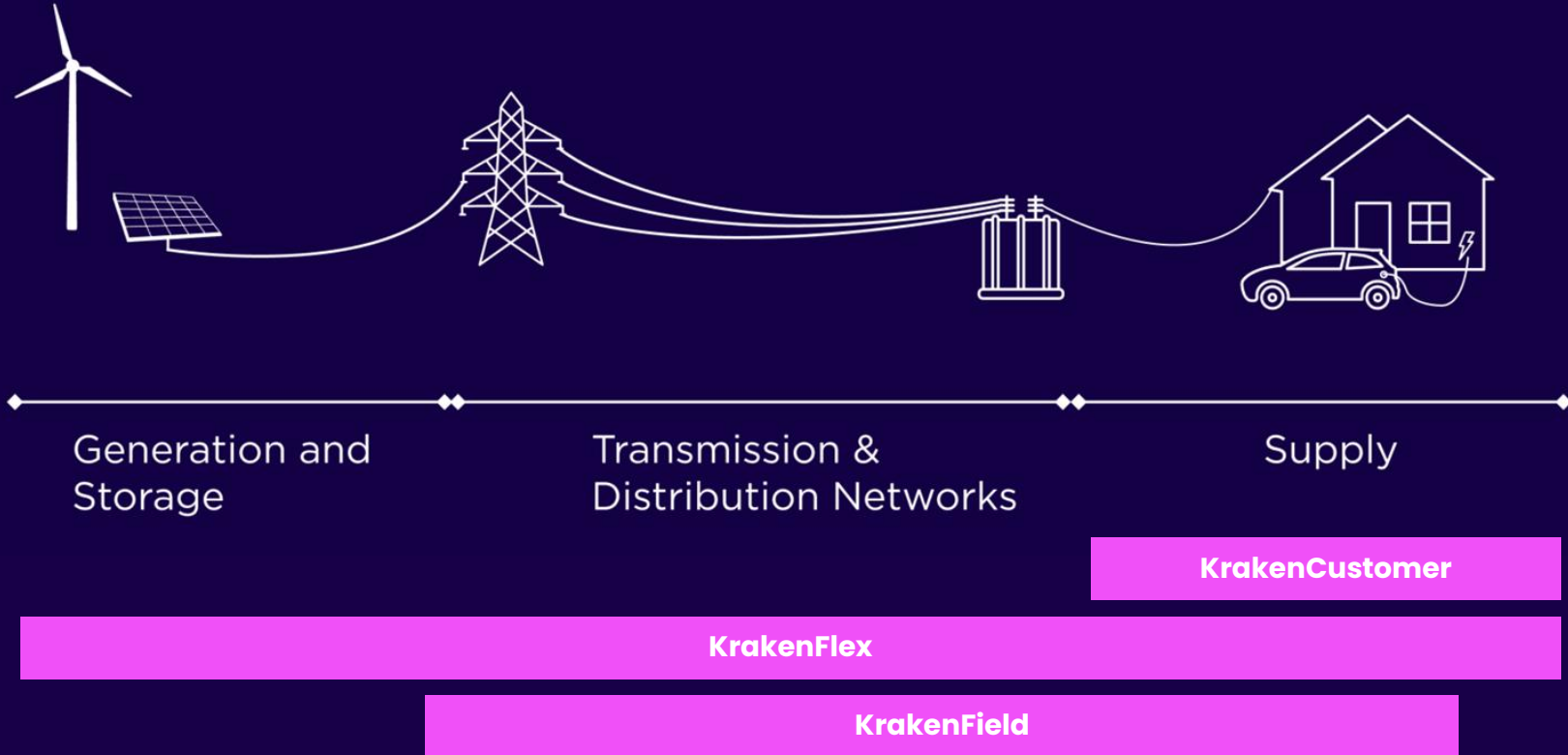


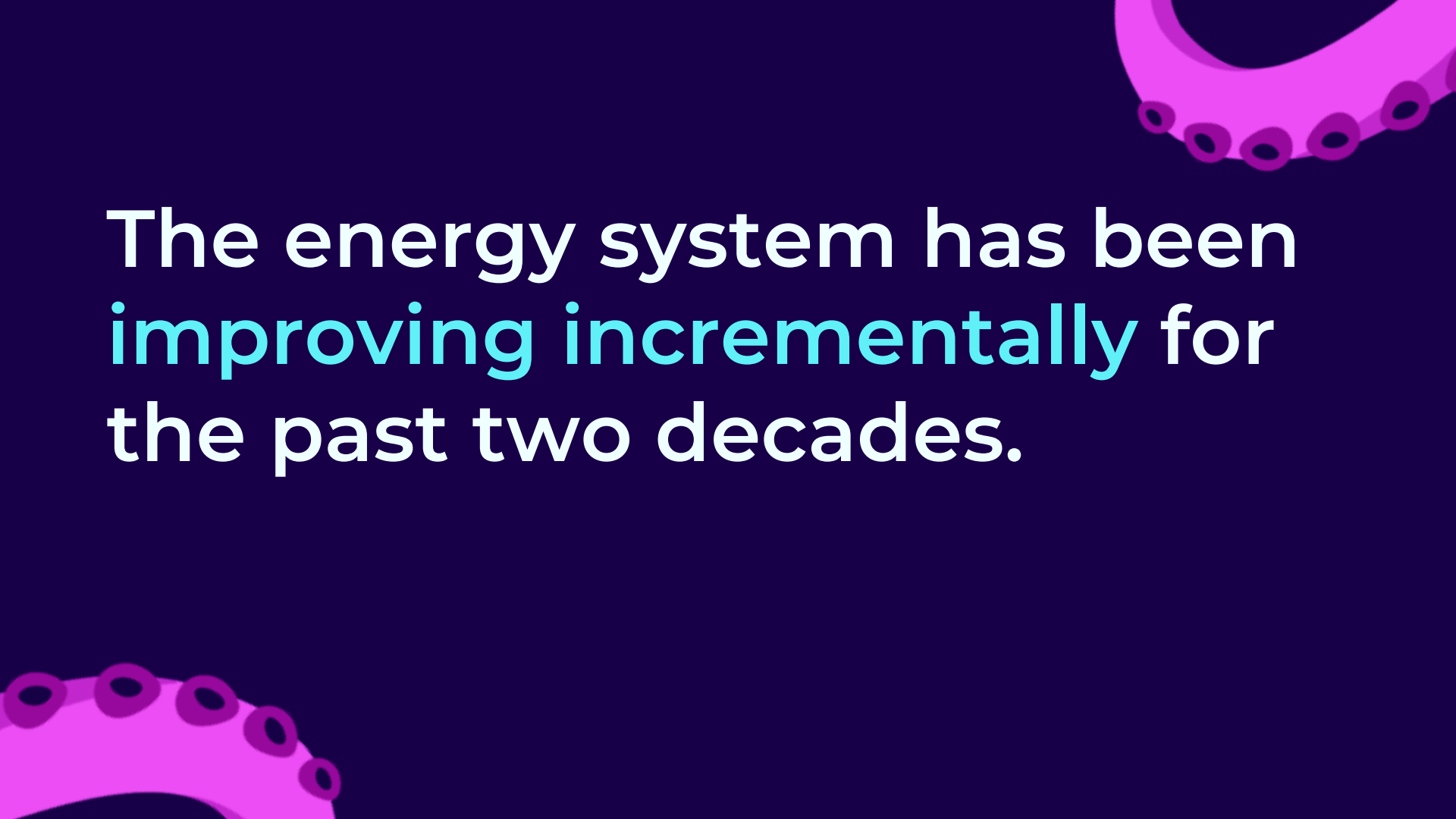
KRAKEN

*Consumer Flexibility:
Energy's biggest revolution*



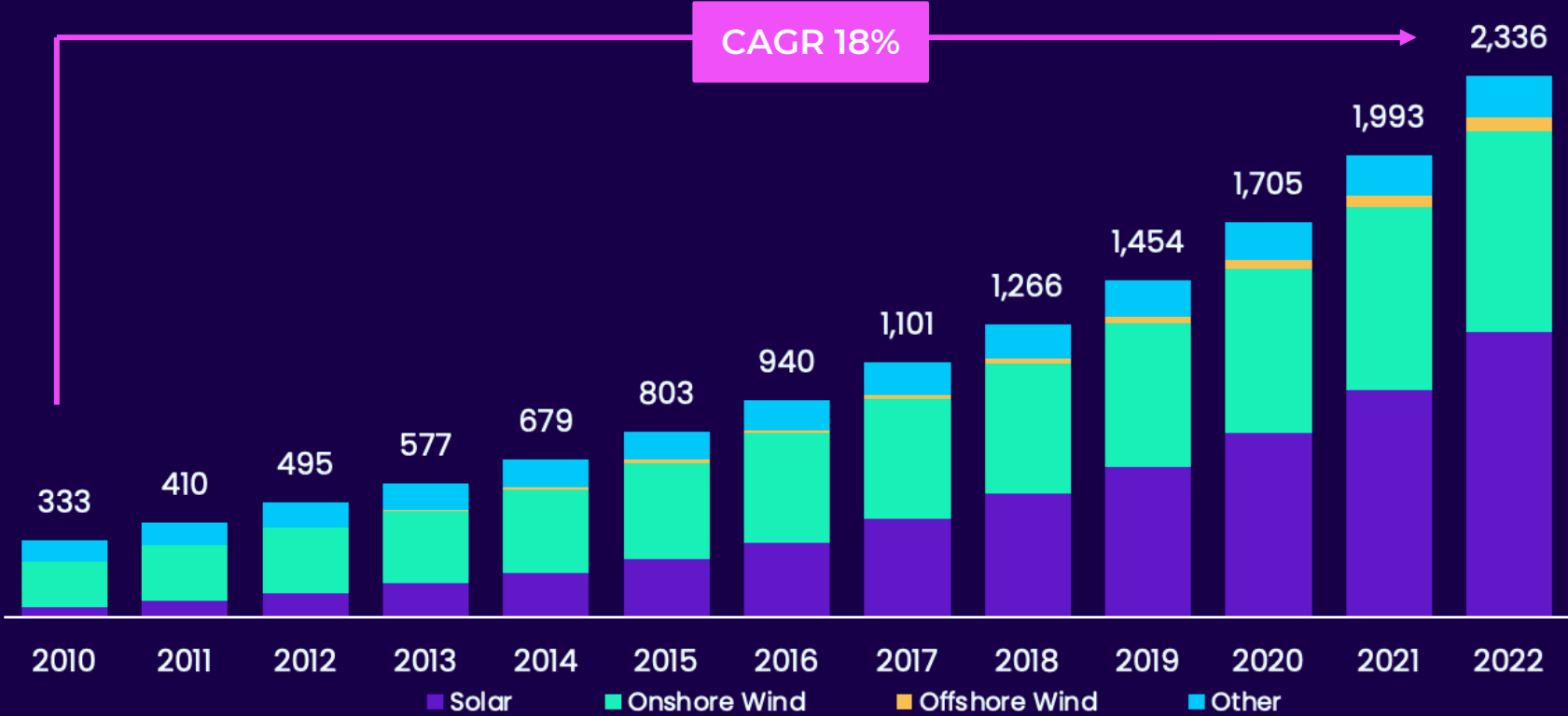
Kraken serves all parts of the utility





The energy system has been
improving incrementally for
the past two decades.

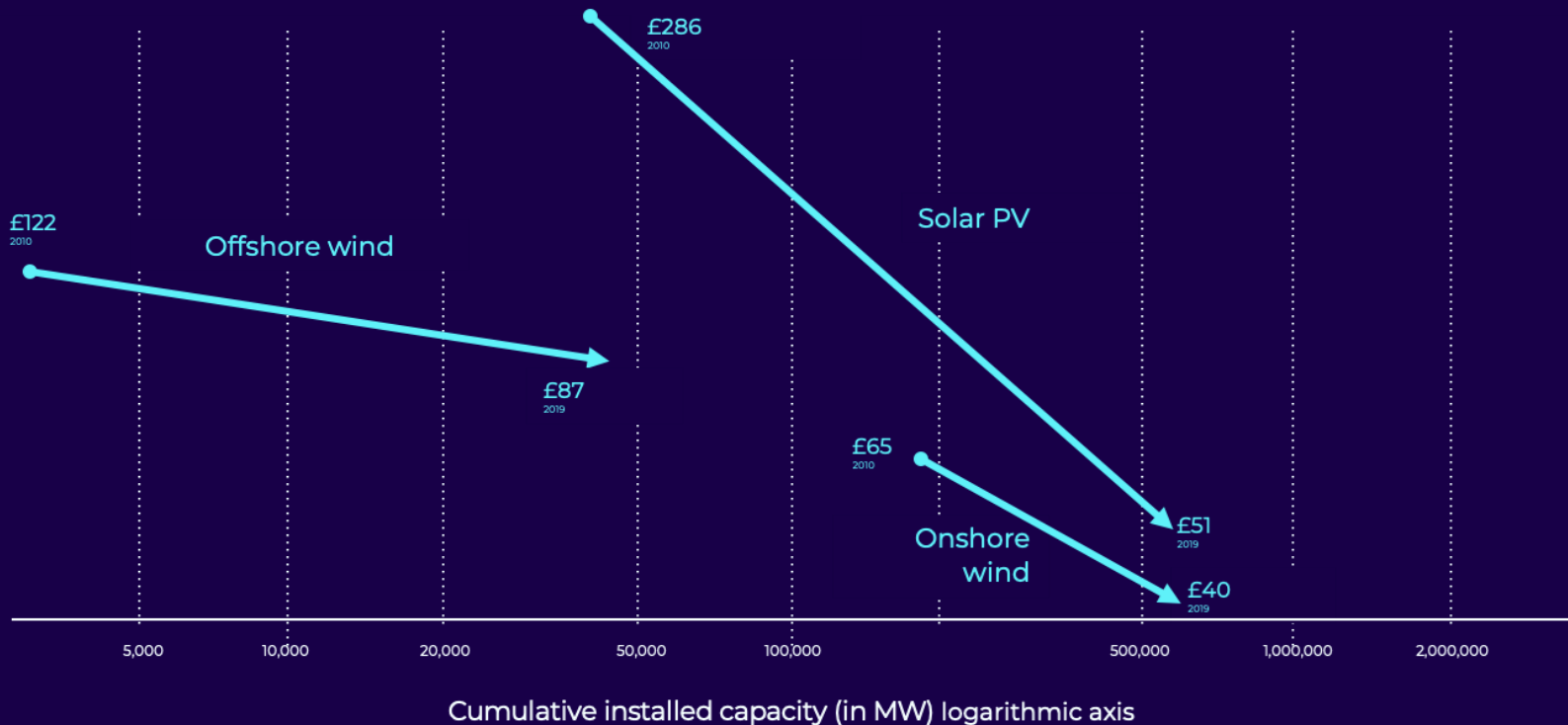
Subsidy Era | Government subsidies led to steady build out



Source: Bloomberg NEF

Merchant Era | Deploying more renewables and storage has incrementally driven down costs

Price per MWh of electricity Global weighted average LCOE without subsidies



As we rapidly
moving into the
consumer era we
need a step
change

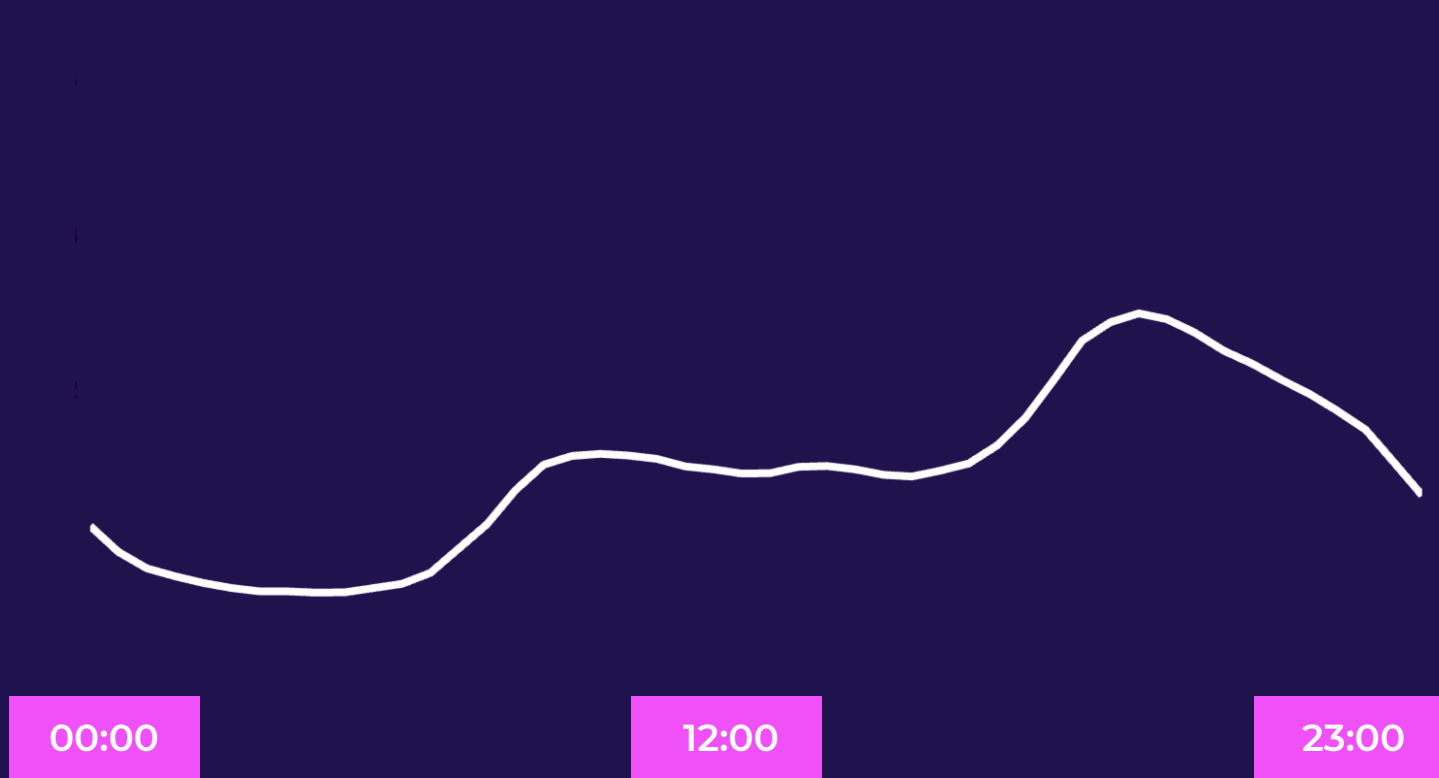
THINGS
WILL
CHANGE



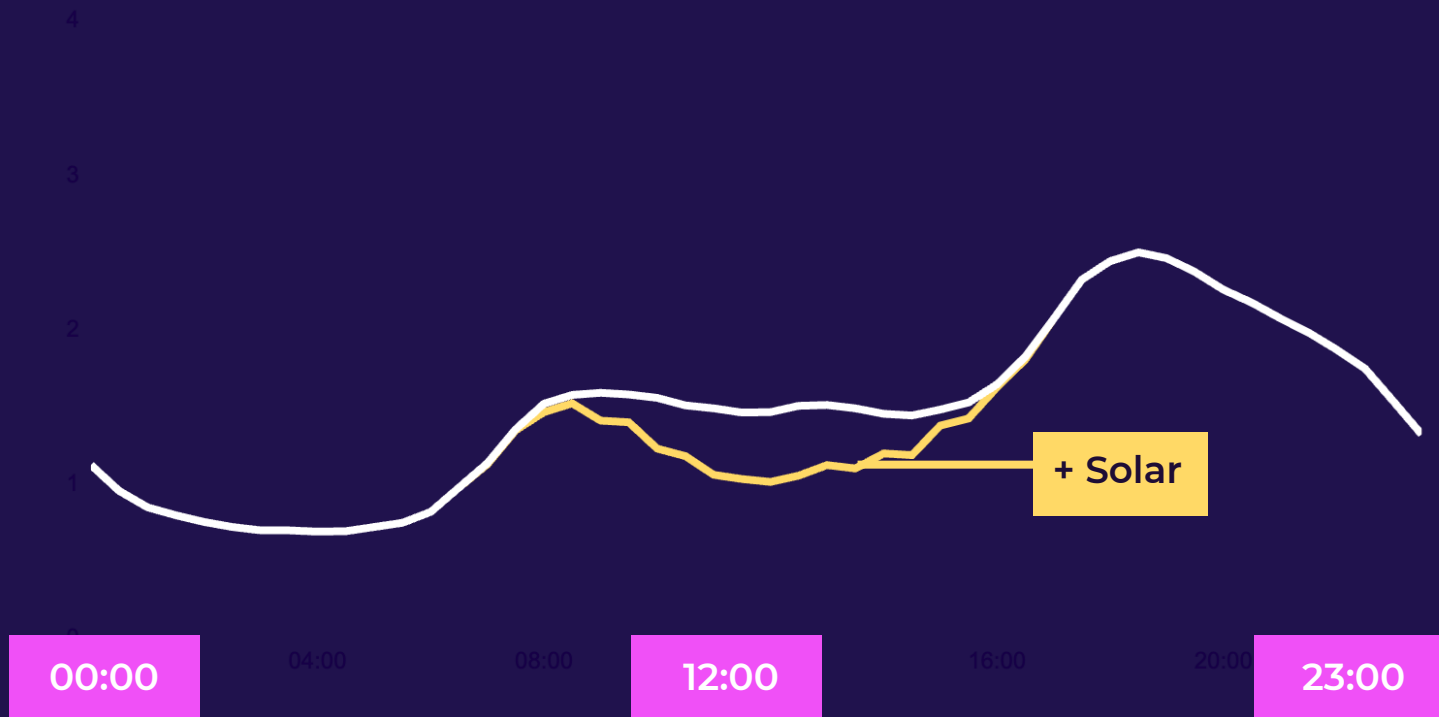
But demand is
changing



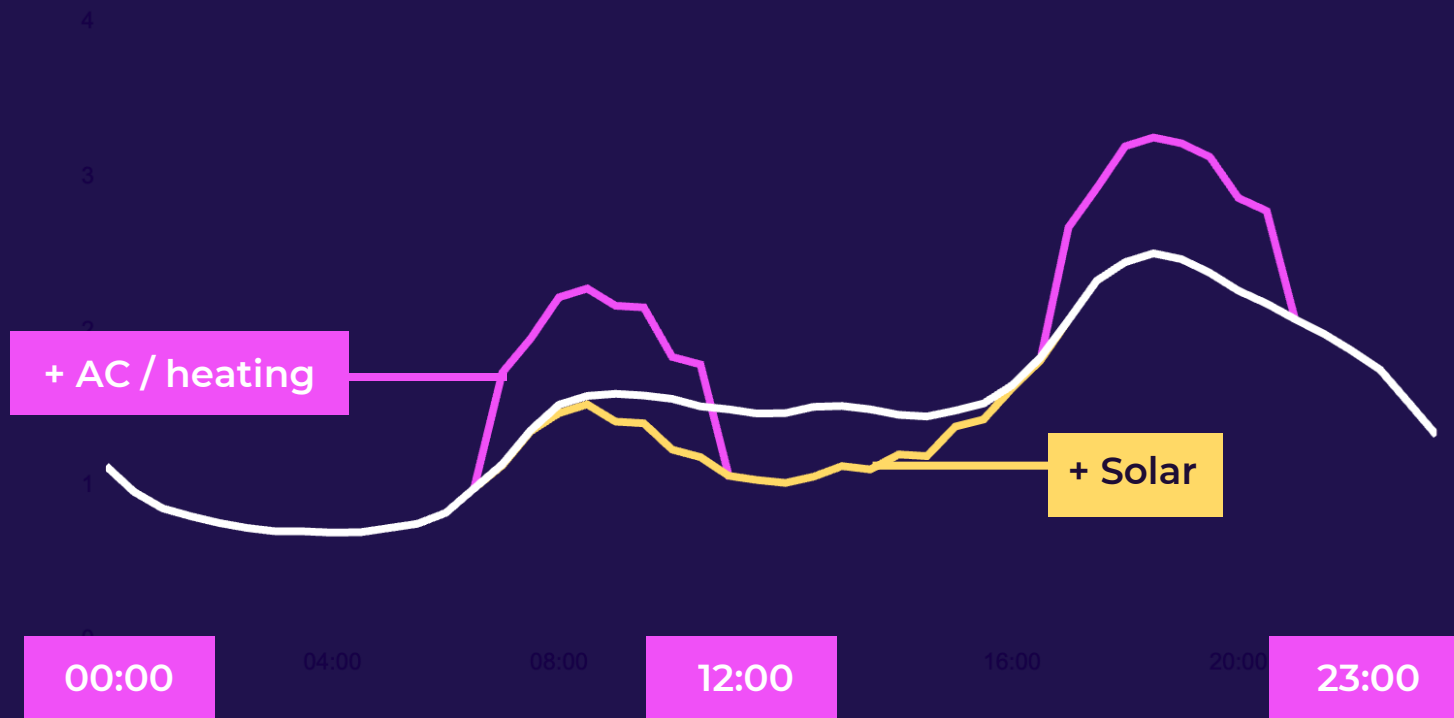
Energy Use



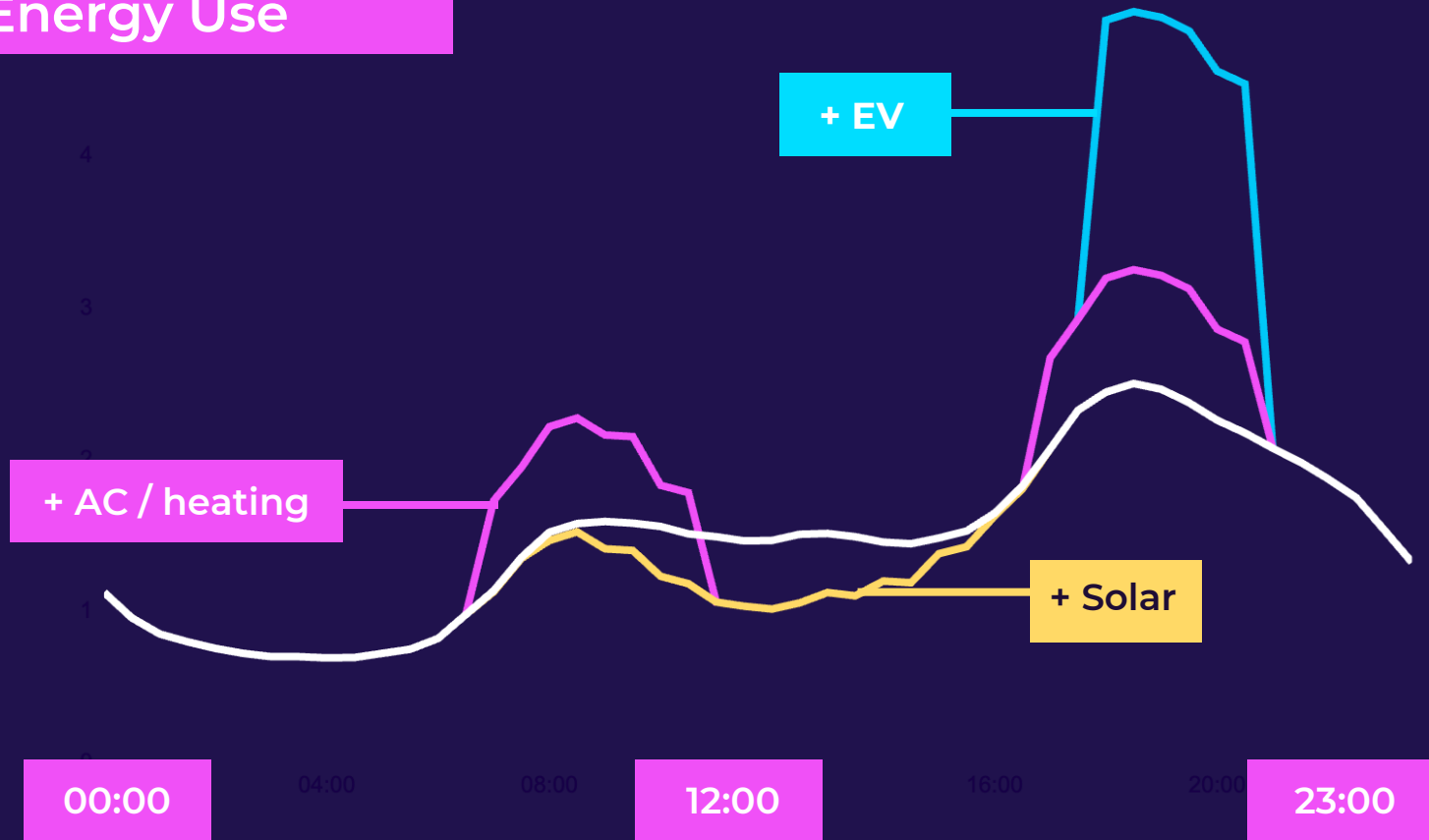
Energy Use



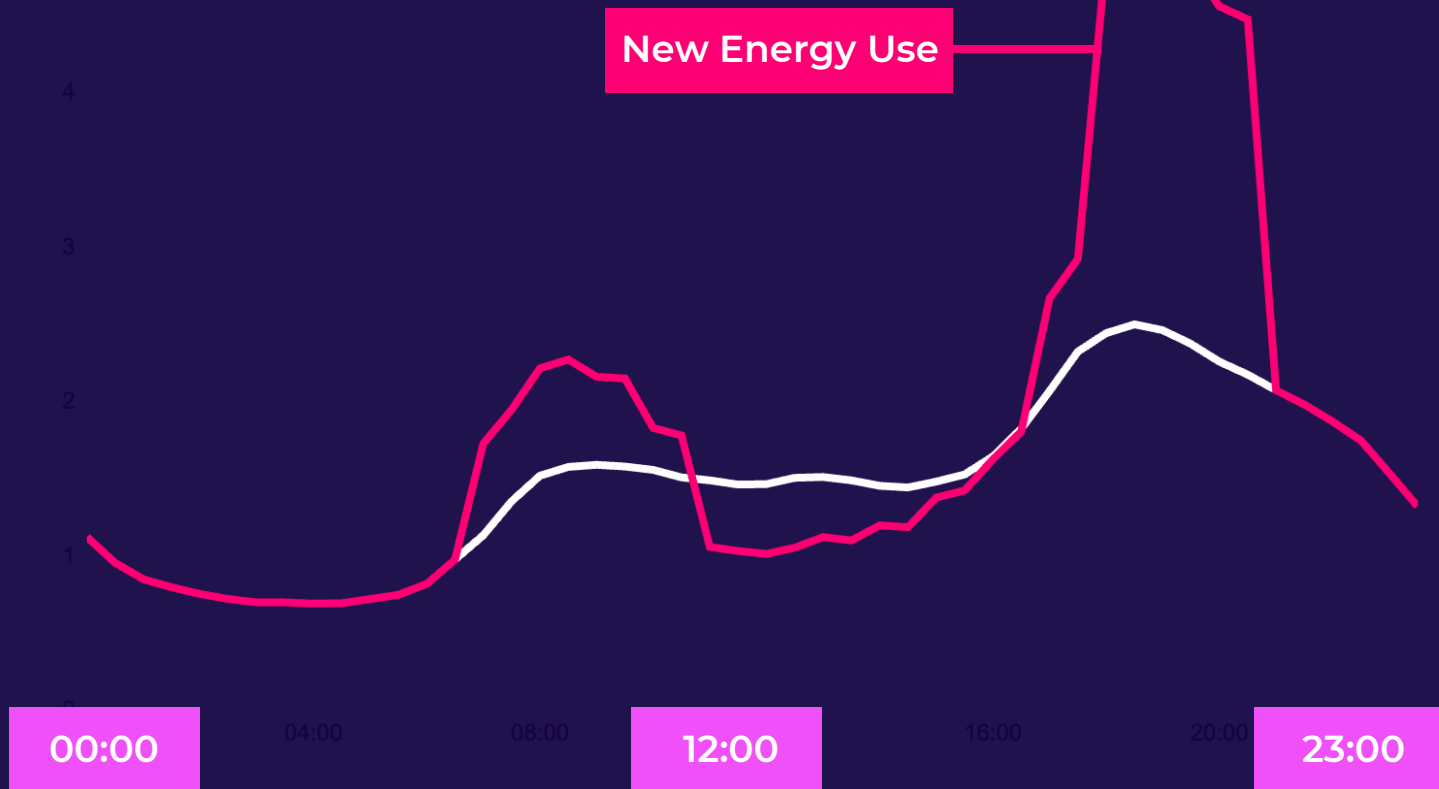
Energy Use



Energy Use



Energy Use



2023-30 growth

40 million today

**200 million new
devices by 2030**

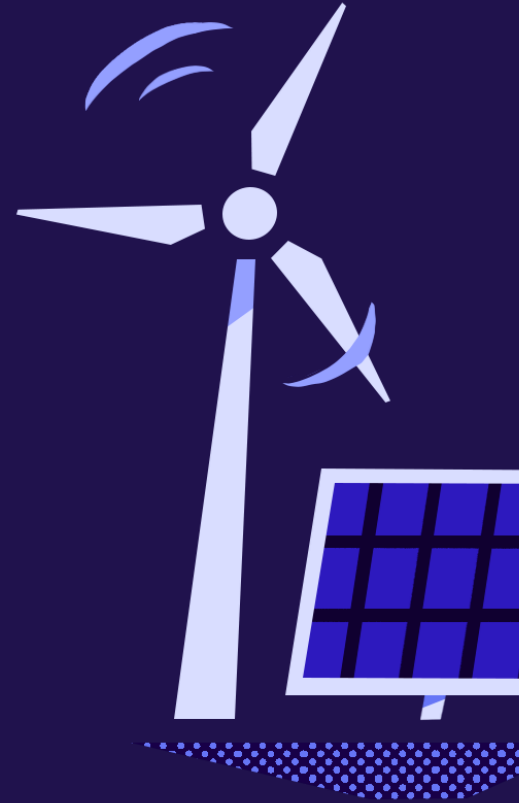
Devices



Countries



Technology to the rescue





A stylized stopwatch icon with a large magenta circular body and three magenta tick marks at the top. The number '0.62' is displayed in large white font in the center of the circle.

0.62

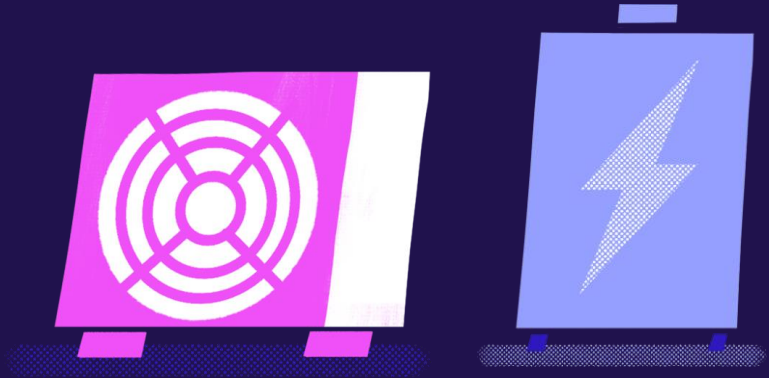
seconds

There are 4 key areas that
technology can deliver
disruptive change



Good news:

A lot of the technology we
need already exists

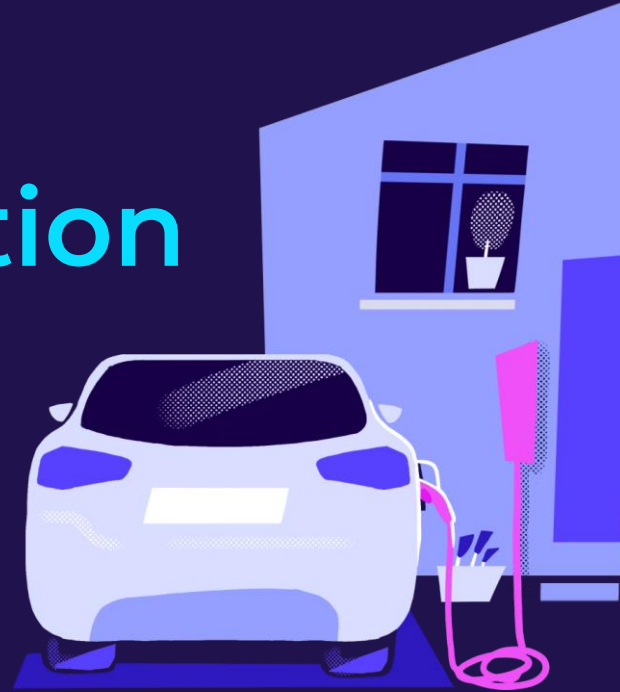


Technology to the rescue

- Connect everything
- Digitize distribution networks
- Unleash Consumer participation
- Optimize across the whole system

200 million connected devices by 2030.

As well as a proliferation of makes, models, standards, etc





BYD

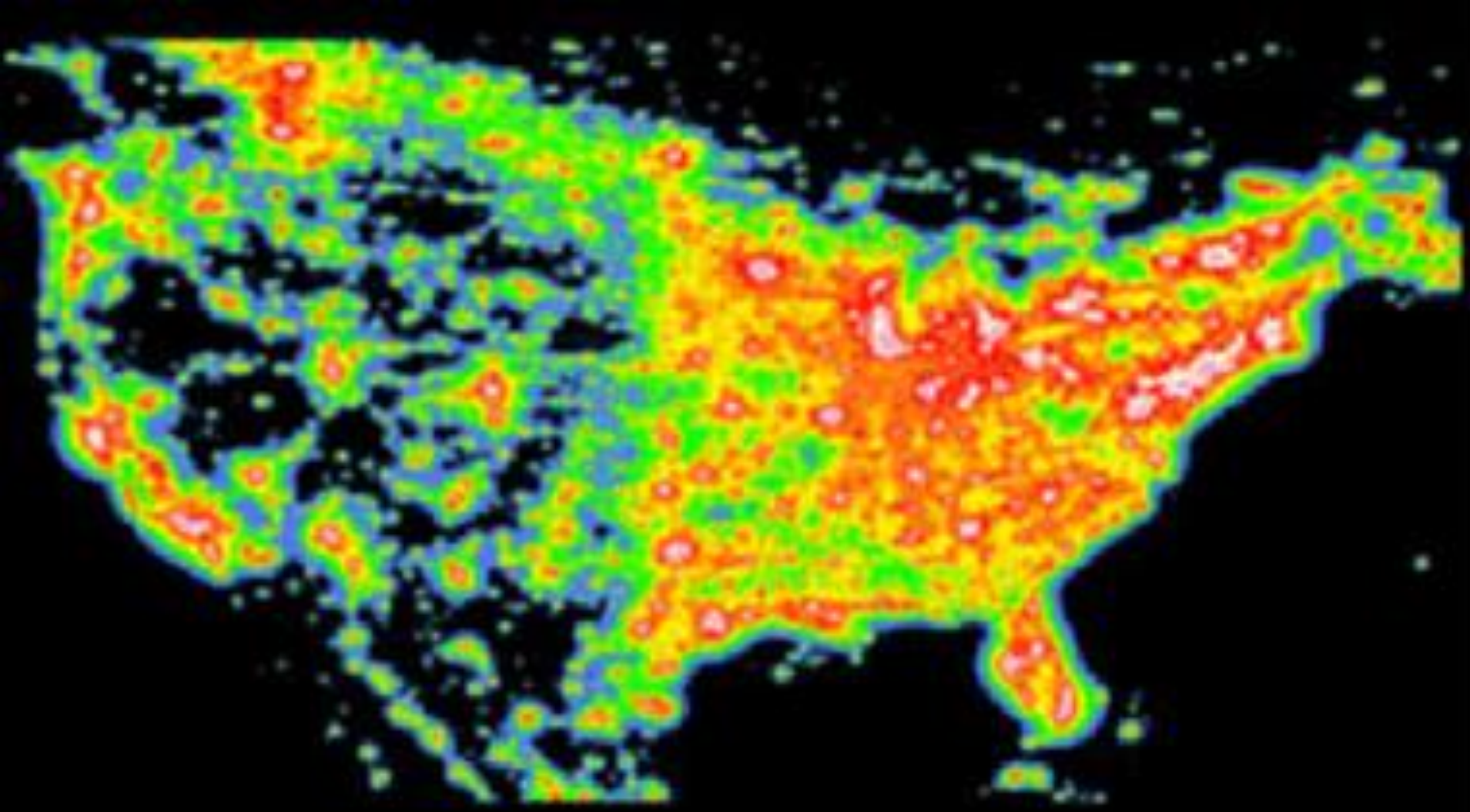


Ohme



Technology to the rescue

- Connect everything
- Digitize distribution networks
- Unleash Consumer participation
- Optimize across the whole system



The image features a dark blue background with stylized pink octopus tentacles in the corners. The tentacles have suction cups and are positioned in the top-right and bottom-left corners. In the center, the text "5%" is displayed in a large, white, sans-serif font.

5%



The image features a dark purple background with stylized pink octopus tentacles in the corners. The tentacles have suction cups and are positioned in the top-right and bottom-left corners. In the center, the text "70%" is displayed in a large, white, bold, sans-serif font.

70%

Kraken maximising renewable generation

● Consumer ● Battery ● Wind ● Solar ● Generator & Peaker

07-09-2023 01:25 GMT+1



Speed 1x



Assess

Consumer

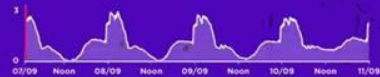
Inputs

Charts



STORED ENERGY 323 MWh

RENEWABLE GENERATION 919 MW



Consumer Consumption (MW)



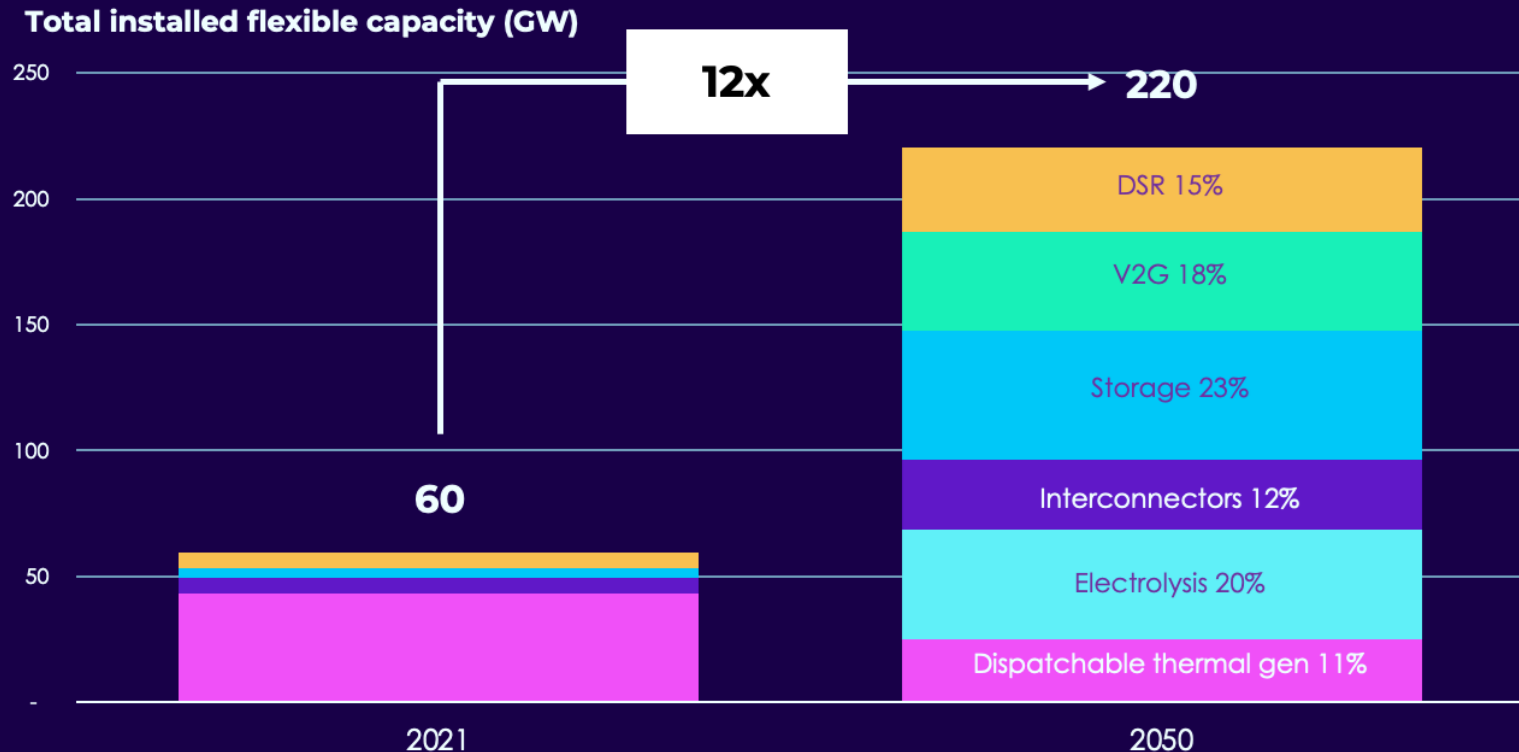
Stored Energy (MWh)



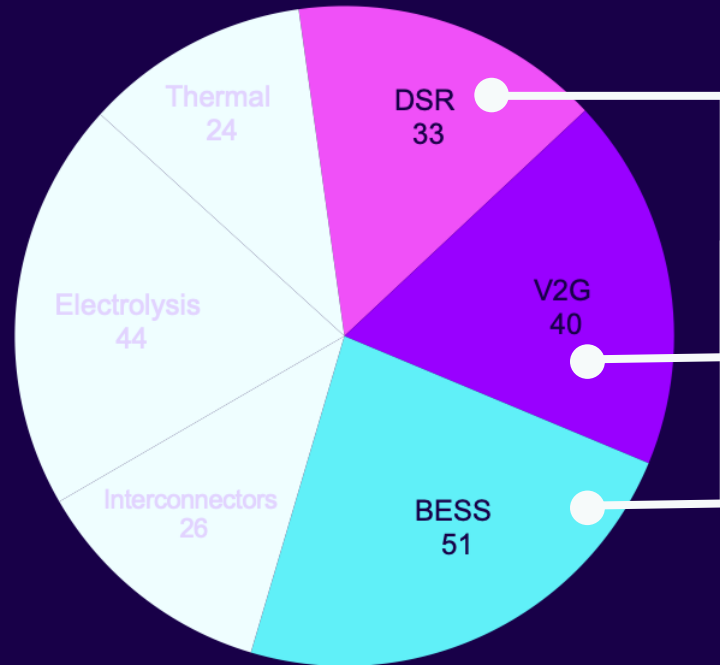
Technology to the rescue

- Connect everything
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- Unleash Consumer participation
- Optimize across the whole system

GB will require 12 times more non-thermal flexibility by 2050 than today

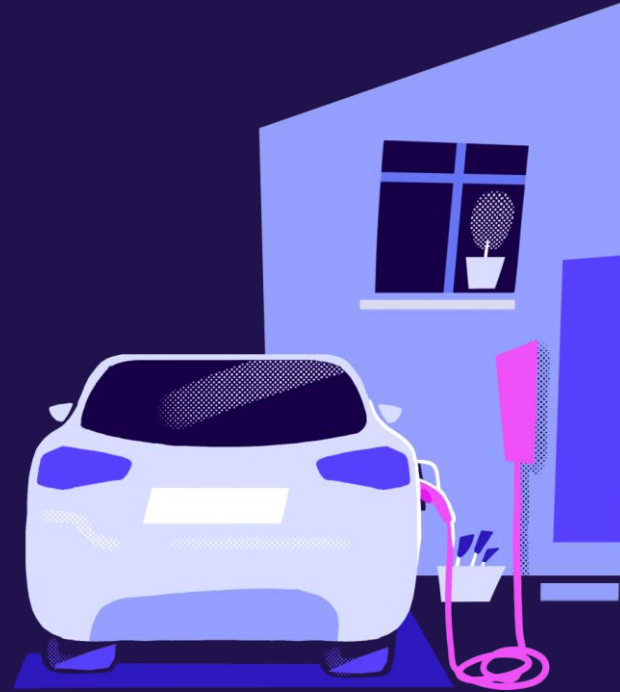


Almost 80GWs assumed to be from **consumer flexibility**



Over a third of the required flexibility will come from consumers

What do
consumers really
want?



Cheap range
when I need it



A return for my investment



Warm or cool home
at low cost when I
am there



SmartFlex | Next generation smart tariffs enabling consumer engagement

Select the device you would like to integrate with

If you have multiple devices, just pick one.

Intelligent Octopus may only be able to connect to certain models.



Electric Vehicles



Chargers



Heat pumps



Thermostats



Hi Harry,

Let's get you set up



Car

Tesla

Model

Model 3 Standard Range +



Charger

Generic

Model


7kW



Authenticate device



Test charger connection



We've mapped your upcoming charge

View charging schedule ^

- ⚡ 22:00 - 23:00
- ⚡ 00:30 - 06:00
- ⚡ 06:00 - 06:30
- ⚡ 07:00 - 07:30

ⓘ Charging explained

Charging preferences

Charge limit	Ready by time
100% ▾	07:30 ▾

Need to charge now? [Bump Charge](#)

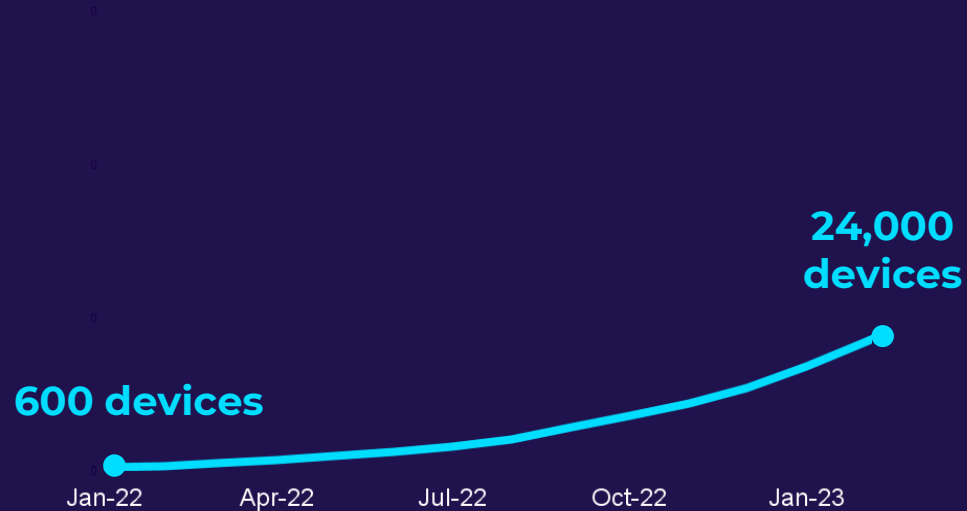
Charging history

Devices & load under management via Kraken

600 devices



Devices & load under management via Kraken



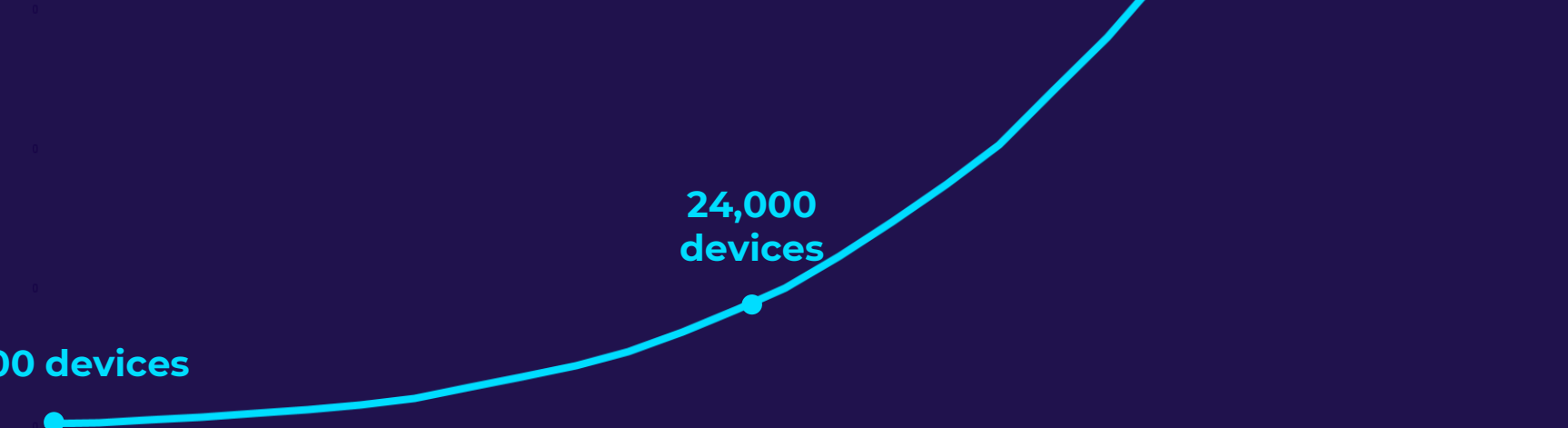
Devices & load under management via Kraken

600 devices

24,000 devices

142,000 devices
893 MW

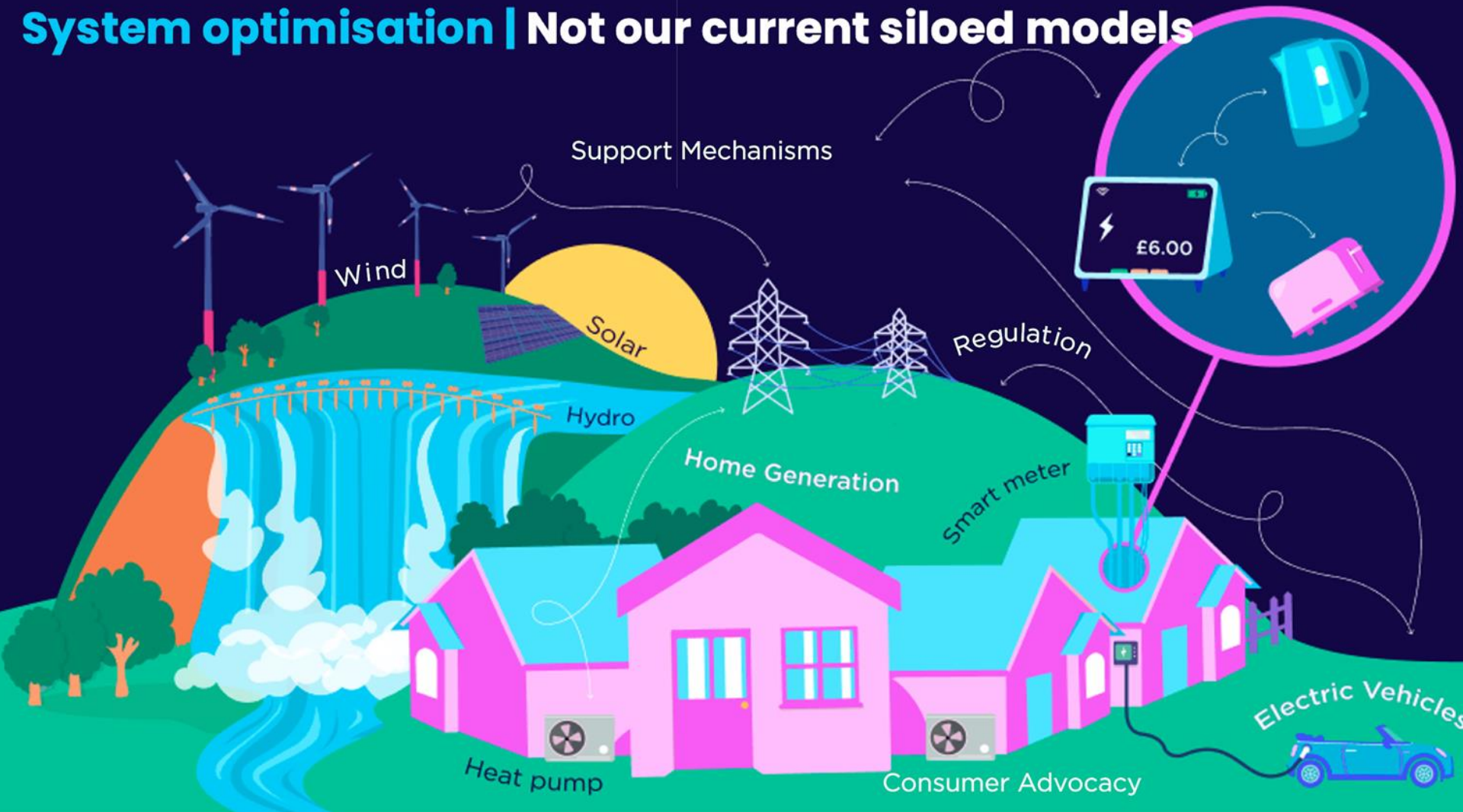
Jan-22 Apr-22 Jul-22 Oct-22 Jan-23 Apr-23 Jul-23 Oct-23 Dec-23 Feb-24



Technology to the rescue

- Connect everything
- Digitize distribution networks
- Unleash Consumer participation
- Optimize across the whole system

System optimisation | Not our current siloed models



Technology to the rescue

- Connect everything
- Digitize distribution networks
- Unleash Consumer participation
- Optimize across the whole system

We can no longer rely on
incremental improvements
to meet targets we need to
think and act differently

Thank you

Tom Breare
Global Head of Partnerships

Email: tom.breare@krakenflex.com

LinkedIn:
Thomas Breare

