

TRENDS INFLUENCING THE DEVELOPMENT OF ESTONIA'S DISTRIBUTION NETWORK

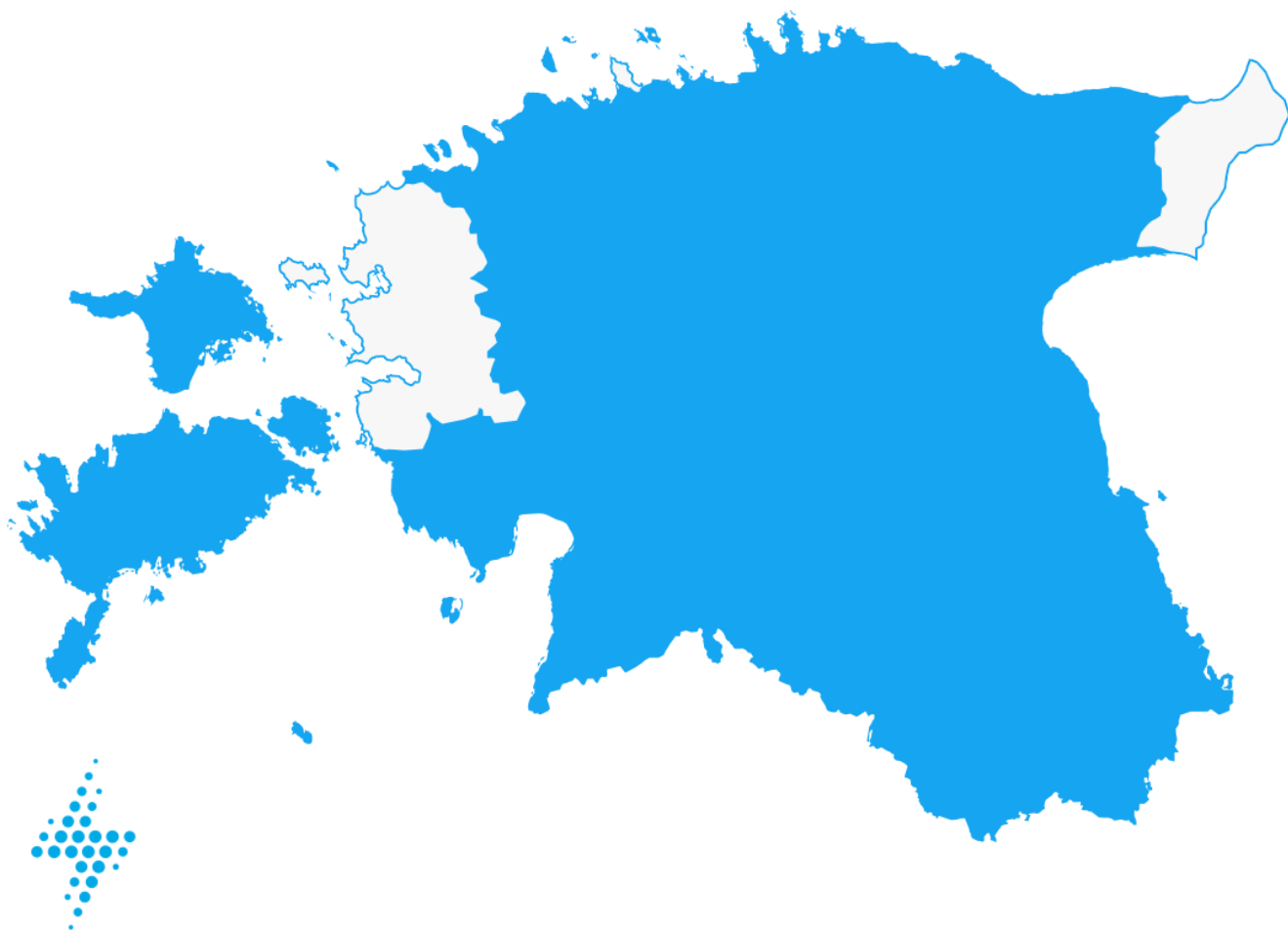
Mihkel Härm

Chief Executive Officer

Elektrilevi OÜ



ELEKTRILEVI IS THE LARGEST DSO IN ESTONIA



ELEKTRILEVI

60 000 km

Power lines

24 000

Substations

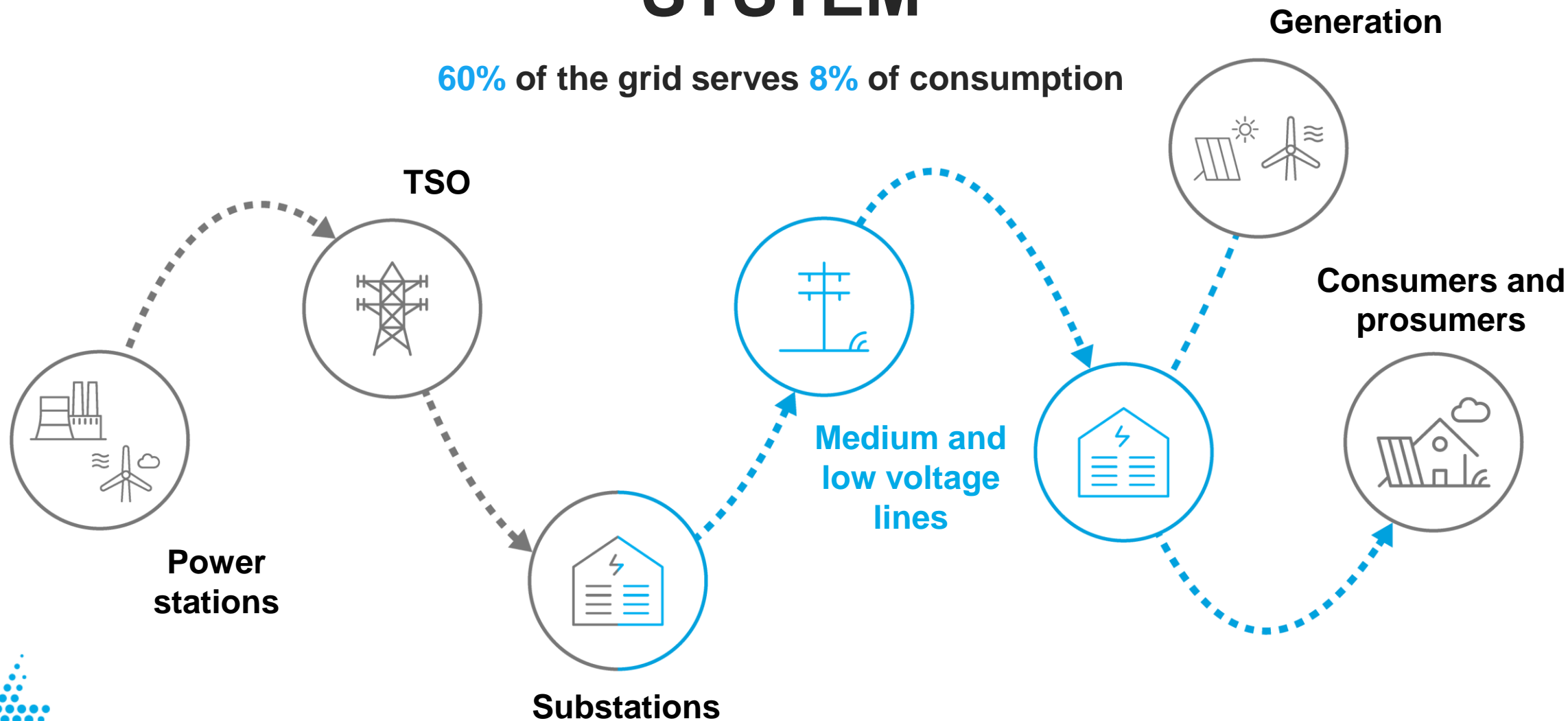
650 000

Metering points

508 000

Clients

ELEKTRILEVI AS PART OF THE POWER SYSTEM

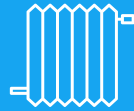


CHALLENGES FOR 2030

ELECTRIFICATION

1,8% demand in growth annually
(until 2030)

+40-50M
Heat pumps



+50-70M
Electric vehicles



+335 TWh new demand /
Industry & P2X



RENEWABLE GENERATION

+470 GW
New renewable
generation



+40 GW
Local consumption



~70%
of new renewable
generation will be
connected to DSO-s

ENERGY EFFICIENCY

>50% of EV charging
will happen during non-peak hours



Smart meters will offer
new solutions for the grid



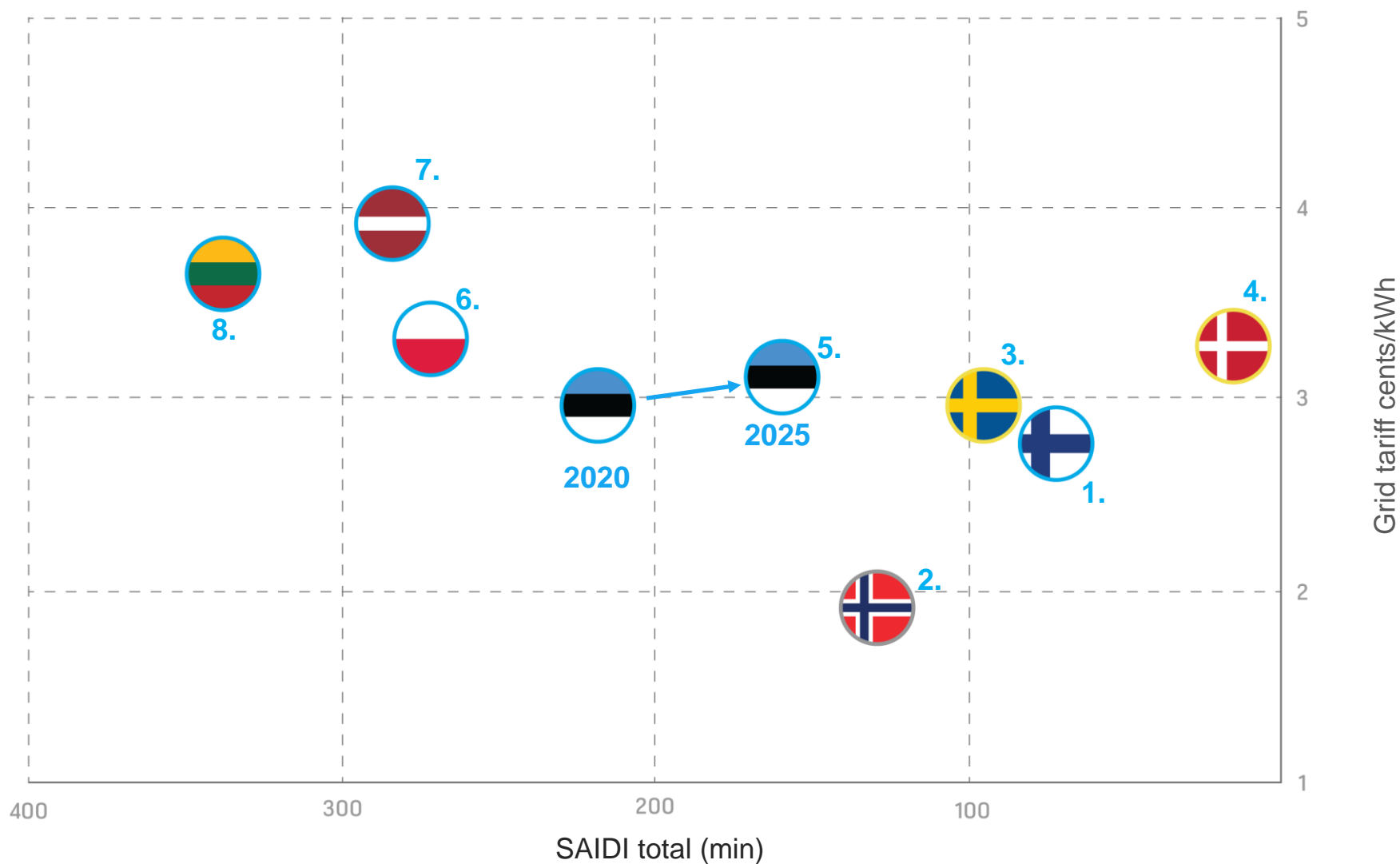
An aerial photograph of a forest landscape. A yellow maintenance vehicle is suspended on a cableway, moving along a line of cables. The forest is dense with green trees, and the ground is covered in brownish soil and some sparse vegetation. A large blue triangle is overlaid on the right side of the image, containing white text. A series of white dots of varying sizes are arranged in a curved pattern along the boundary between the forest and the blue triangle.

CUSTOMERS' EXPECTATION
FOR DSO-s:

**INCREASED
RELIABILITY WITH
REDUCED COSTS**



ELEKTRILEVI PLANS TO MEET OUR CUSTOMERS' EXPECTATIONS



MAIN REASONS FOR OUTAGES

Low voltage grid

22

Medium voltage grid

150

2020



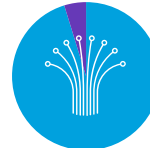
6 min

Other sources



3 min

Faulty contact



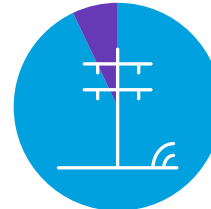
21 min

Faulty cable



28 min

Tripped breaker

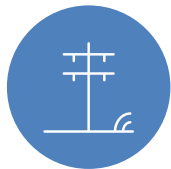


125 min

Faulty overhead line



TOOLS FOR INCREASING RELIABILITY AND REDUCING COSTS



Data based investing



Innovative grid tariffs



Digitalization

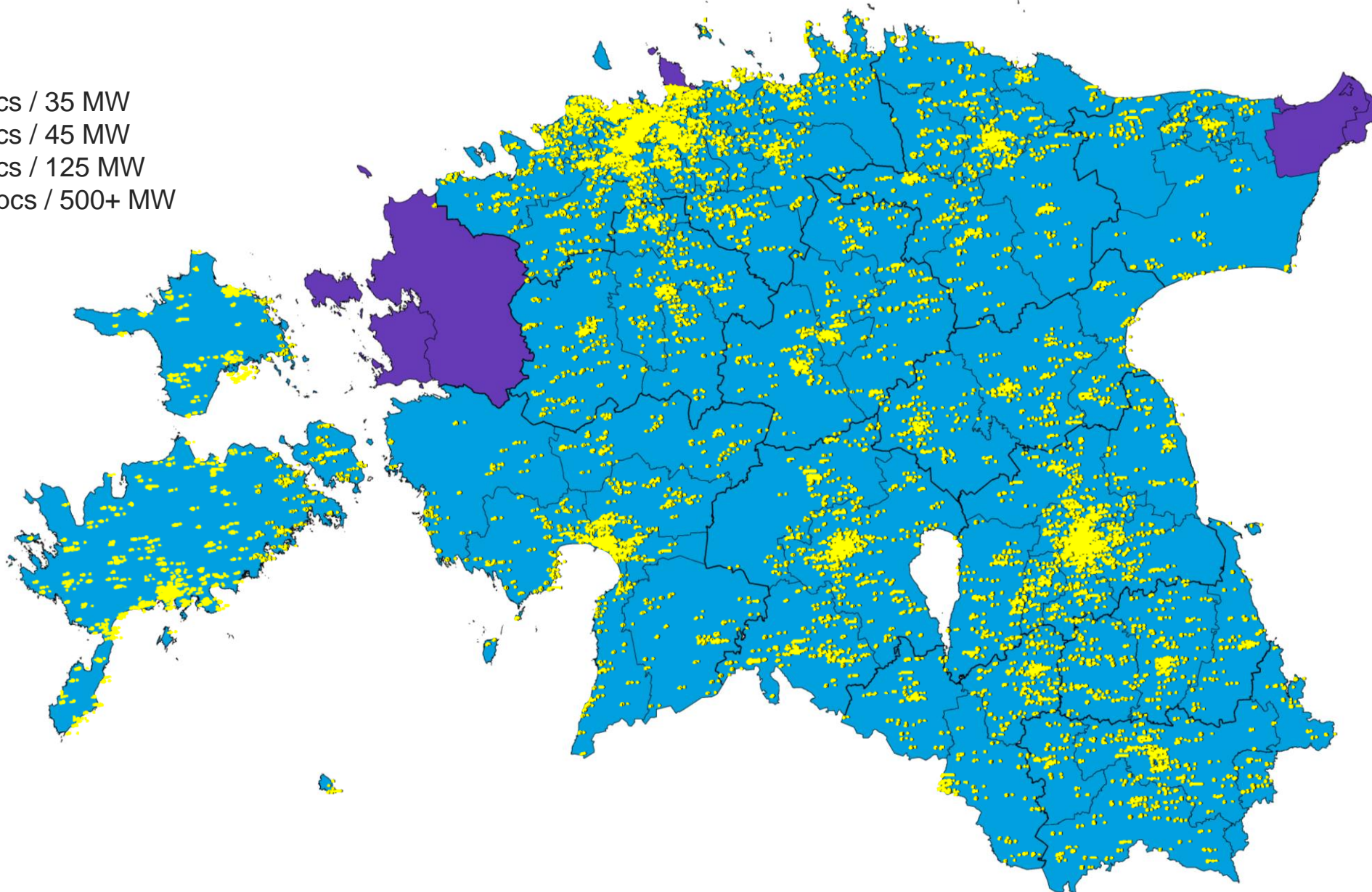


More renewable
generation

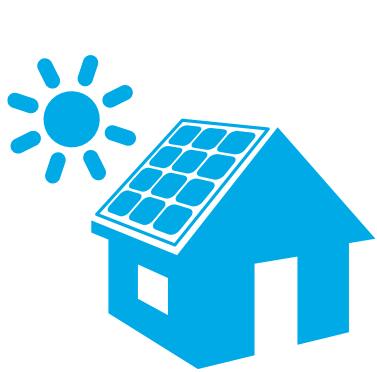


INCREASE OF DISTRIBUTED GENERATION

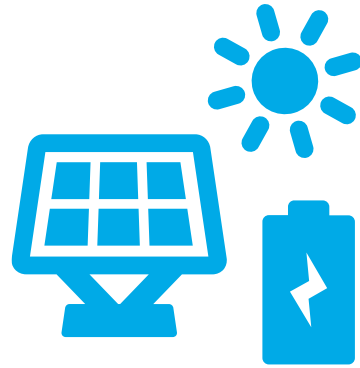
2016 – 1 024 pcs / 35 MW
2018 – 1 954 pcs / 45 MW
2020 – 7 916 pcs / 125 MW
2030 – 16 000 pcs / 500+ MW



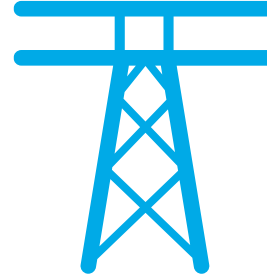
DSO-s WILL BE THE BACKBONE OF ELECTRIFICATION



Prosumers will be connected in less than 30 days



Share of distributed generation will increase



Customers expect better reliability



New digital communication channels





THANK YOU!

mihkel.harm@elektrilevi.ee



elektrilevi

