Decentralized power plants:

How we can produce electricity ourselves in the future

Why will we produce electricity ourselves?

110 kV

6

400/230 V

4000000

The climate crisis requires a rapid transition from fossil to renewable energy sources.¹ At the same time, growing electricity consumption must be taken into account: over the past 30 years, it has increased by more than half.² In addition to a growing population and the increase in electrical devices in our households, the decarbonization of entire industries (e.g., e-mobility, heat pumps, and the chemical, pharmaceutical, and steel industries) will further increase the demand for (renewable) electricity. Nevertheless, all electricity is expected to come from renewable sources by 2030.³

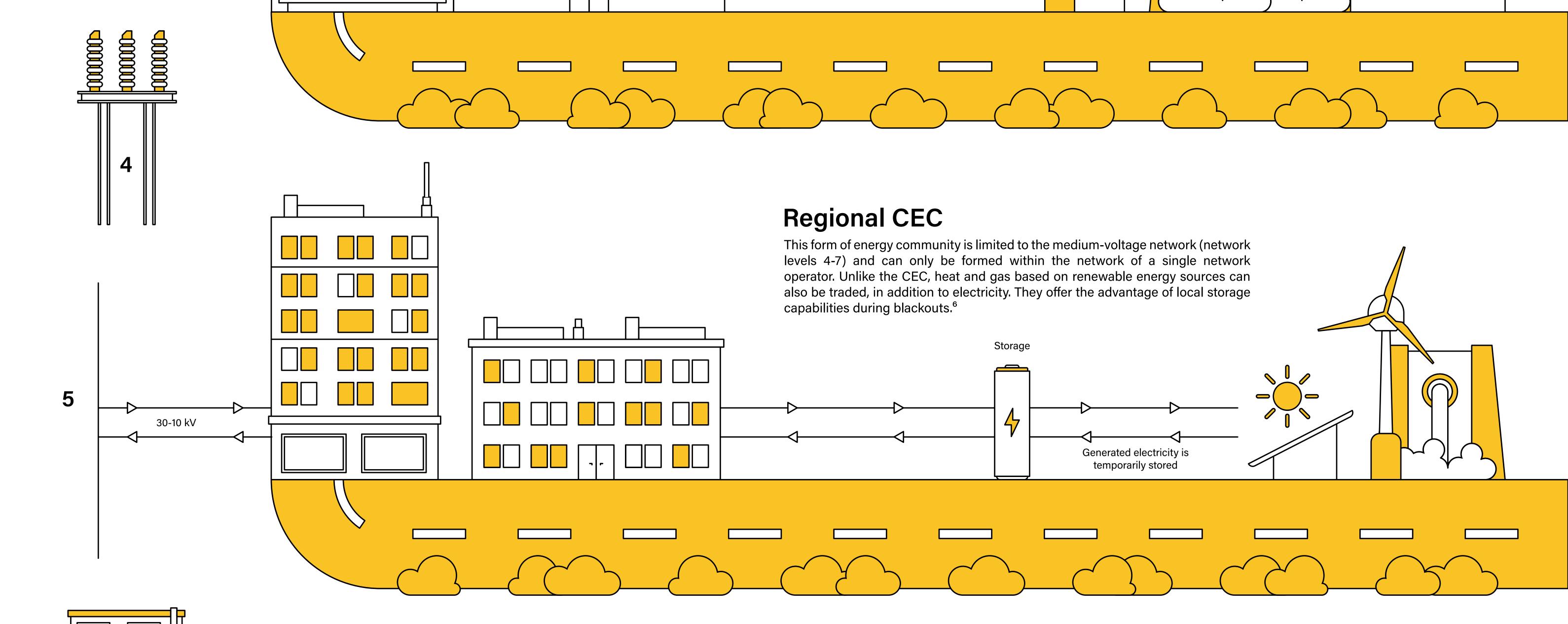
Who will produce electricity?

In addition to the energy sector, households, municipalities, and businesses will play an even greater role in the future by becoming electricity producers themselves (so-called prosumers). More and more people are meeting their own energy needs by installing renewable energy systems, partially or almost entirely – On average, between 2005 and 2021, the installed capacity of photovoltaic systems increased by one-third annually.⁴

1 380/220 kV 2 Substation 3 110 kV 4 Substation/ Busbar 5 30-10 kV 6 Transformer stations 7 400/230 V 0 O

CEC

A citizen energy community (CEC) has no regional ties. This means it can be formed nationwide in Austria across all network levels (1-7) of multiple network operators. Unlike other forms, only electricity can be generated, stored, consumed, and traded – including that from non-renewable energy sources.⁵





If neighbors also invest in renewable energy, the

formation of a local CEC is an option. They are

almost the same as regional CECs, with one

exception: Local CECs can only be formed in the

low-voltage network (levels 6 and 7). By forming a

local or regional CEC, the electricity bill can be

reduced by about a third, as network fees become

Local CEC

cheaper.6 7 8

Storage



Households

Public buildings

Schools

CEF



A community generation facility is intended

solely for private use. It is limited to the

property. Trading with the generated

electricity is not possible.9



