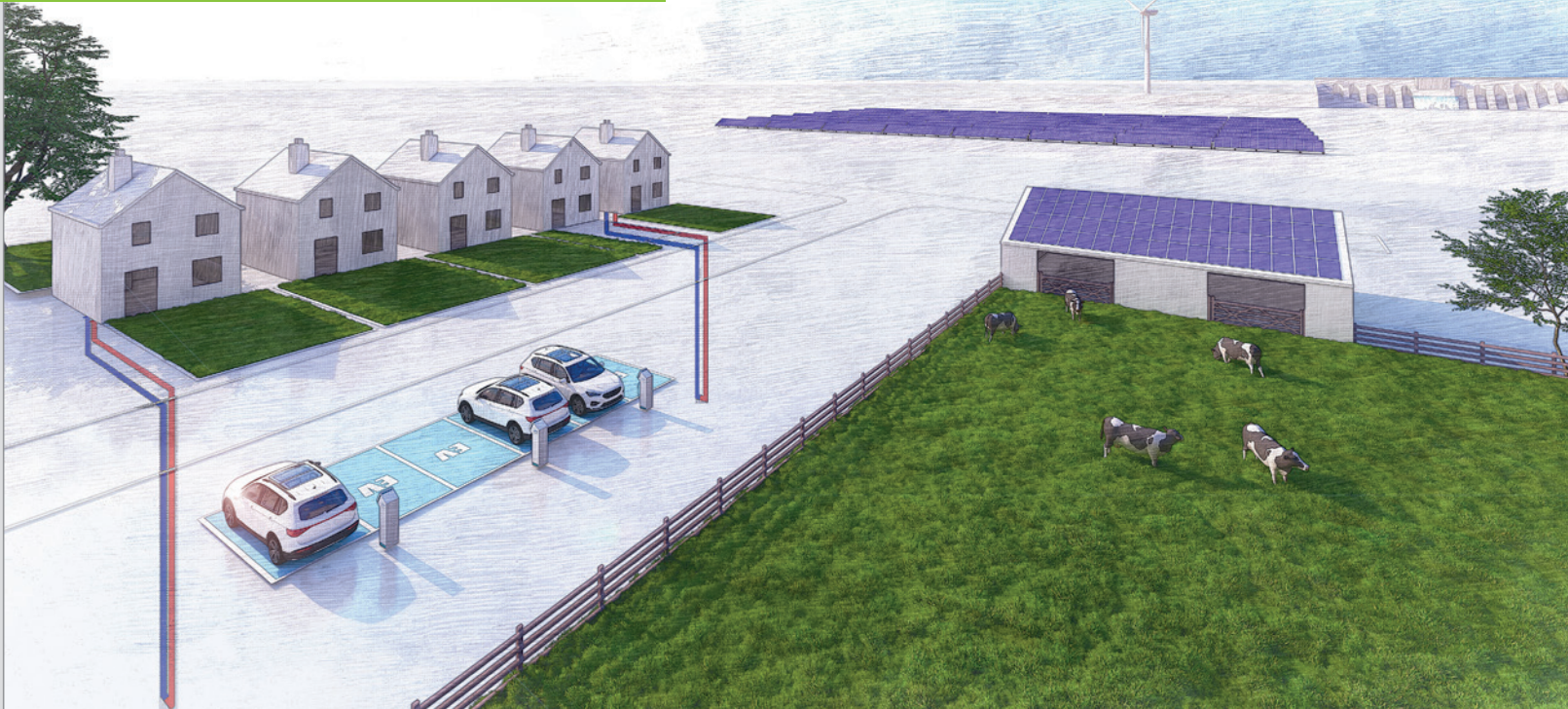


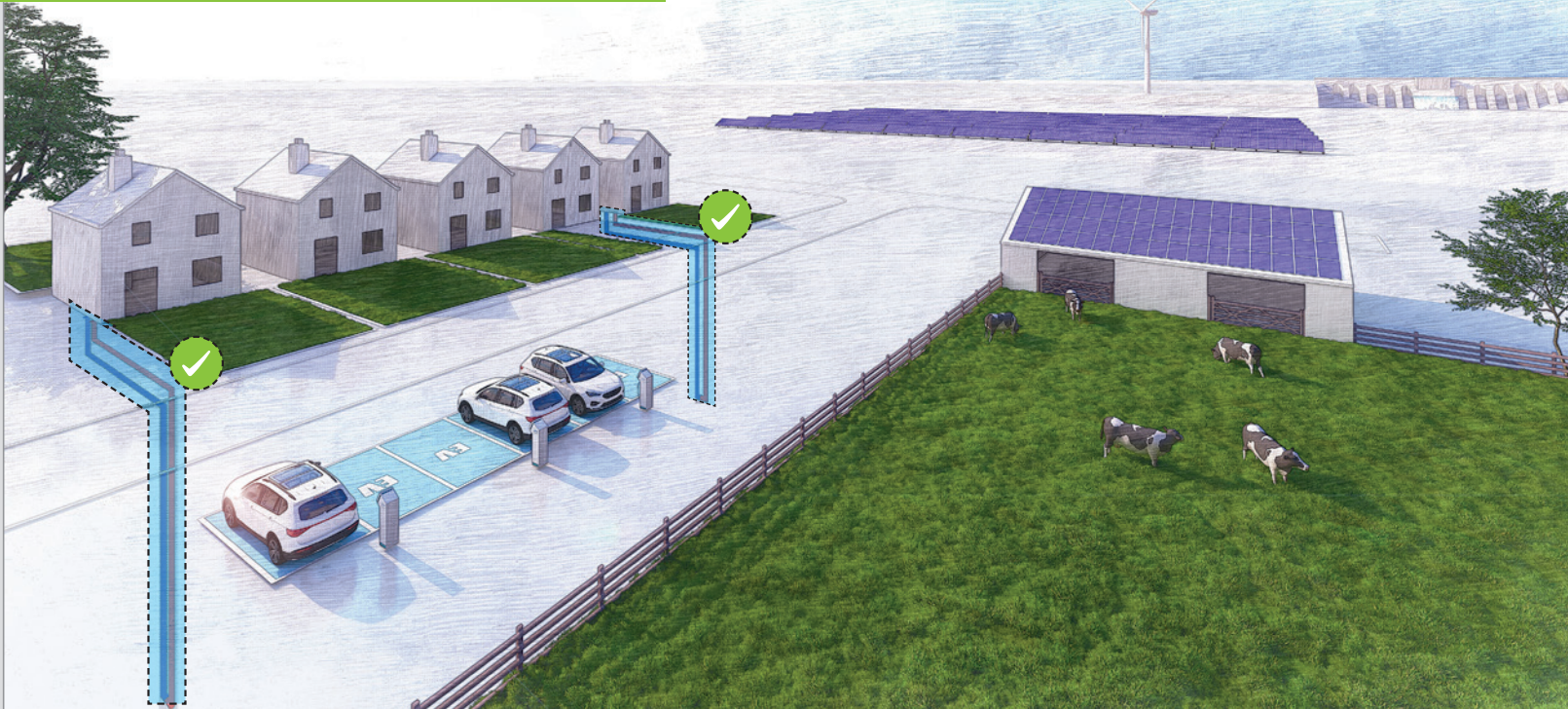
Net Zero Communities



Community **developed, financed, and owned** energy projects to offer a pathway to reduce:

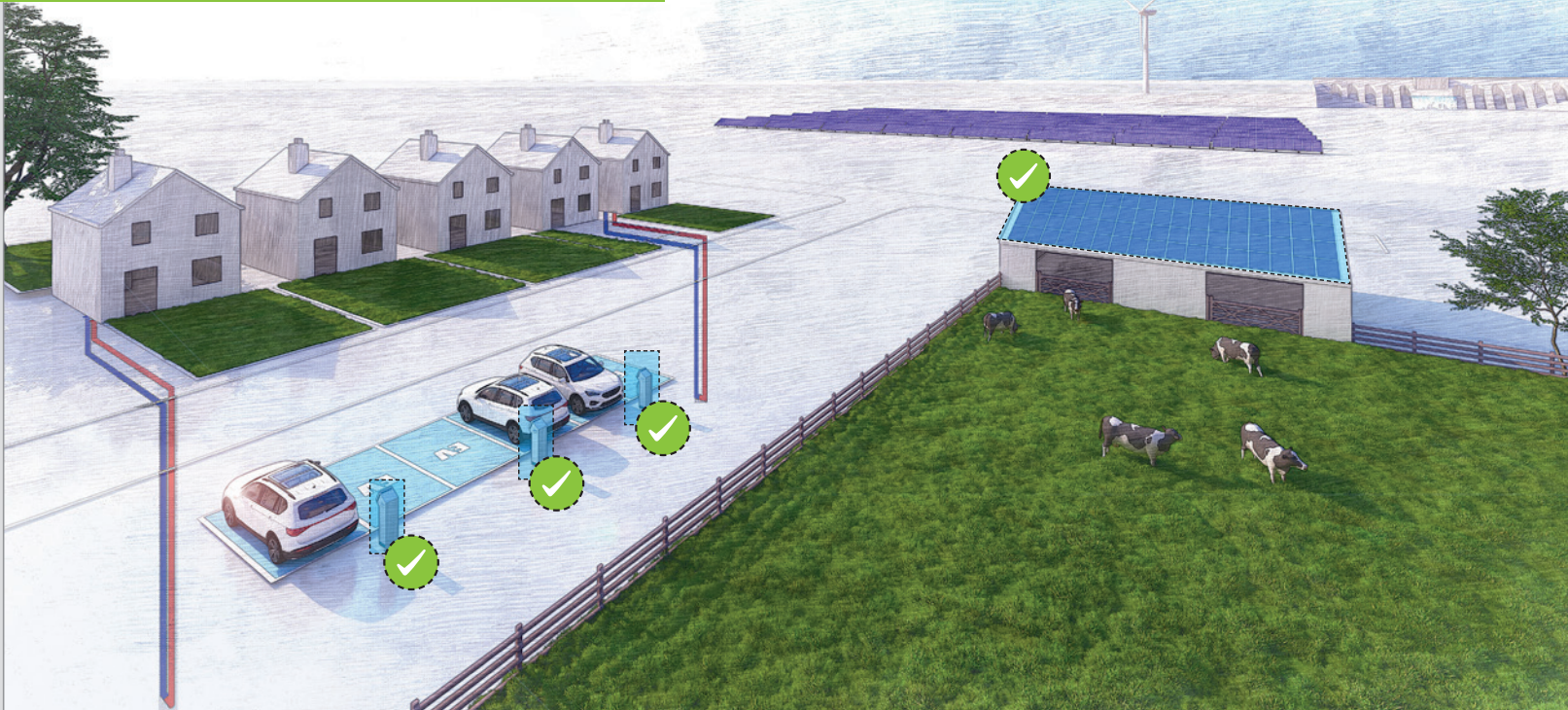
- ✓ ...barriers for those seeking to adopt low carbon heating.
- ✓ ...the cost of energy.
- ✓ ...uncertainty around future energy costs.
- ✓ ...carbon emissions.

Localised heat solutions



- ✓ The community installs, owns, and operates boreholes to make it more affordable for homeowners to install a ground source heat pump.
- ✓ The homeowner installs the heat pump and upgrades the internal heating system (pipework and radiators in the property) if required.
- ✓ The homeowner/property owner does not pay the capital cost of the borehole (£15,000 - £20,000), but instead pays an annual standing charge to access the borehole, of around £1 to £2 a day.
- ✓ The homeowner benefits from lower energy costs overall as a result of the improved efficiency of the ground source heat pump and the energy price discounts available from joining the community energy trading group.

Local energy solutions

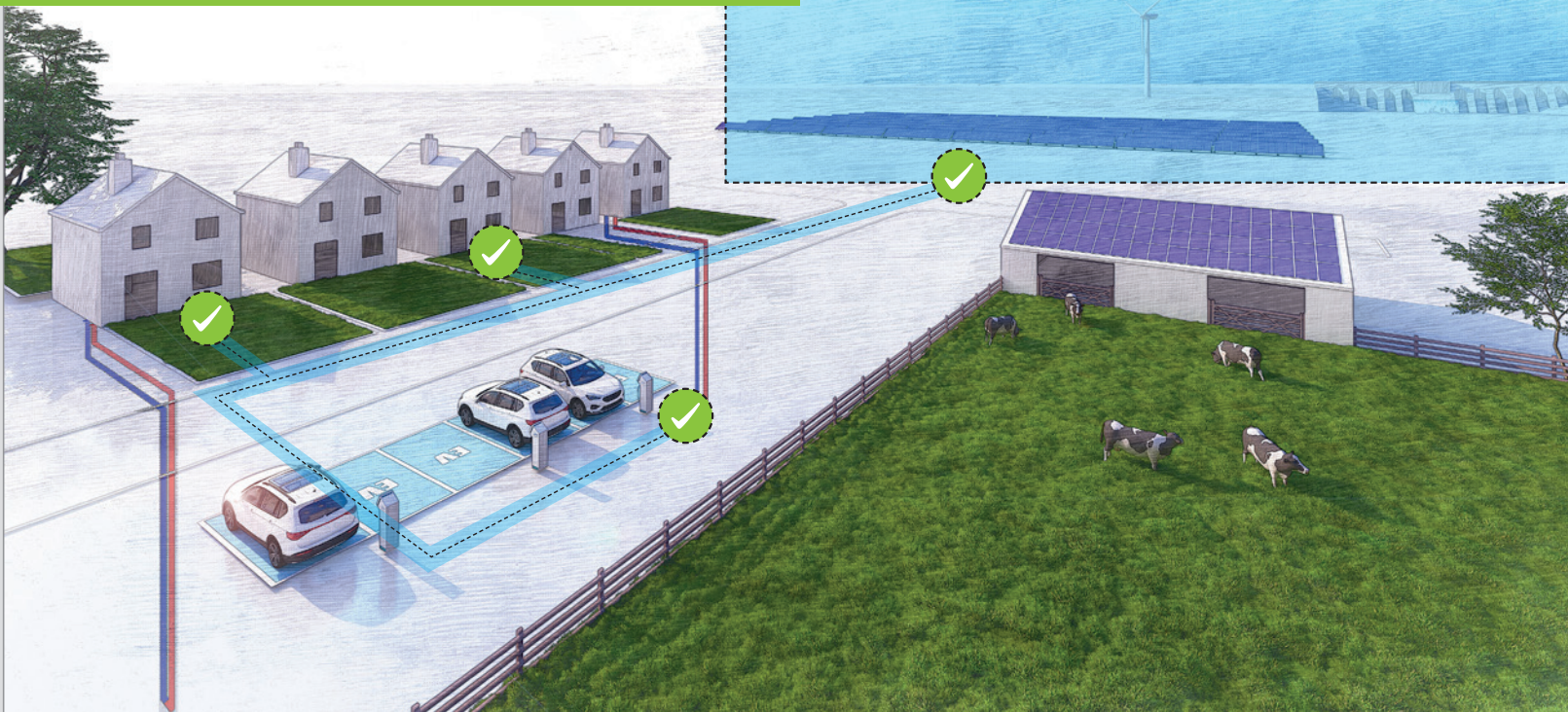


The community also installs and owns:

- ✓ Chargers, where there is local demand; and
- ✓ Solar PV, where requested by large energy consumers, to reduce their energy costs and carbon emissions.

In both cases, any surplus made from the sale of the electricity will be used to support the development of the low carbon heat networks.

Peer-to-Peer energy trading



The community organisation will also establish a local Peer-to-Peer community energy trading group for those members of the community who would like to reduce their electricity bills.

Members of the Peer-to-Peer community energy trading group will buy their electricity through the UrbanChain. UrbanChain use a proprietary software programme to match the energy consumption from the energy trading group with a mix of renewable energy generation from different technology types.

For a project centred around Chipping, this could include buying generation from wind farms in Liverpool, hydroelectric schemes in Cumbria, solar projects in Manchester, and anaerobic digestors in Lancashire.

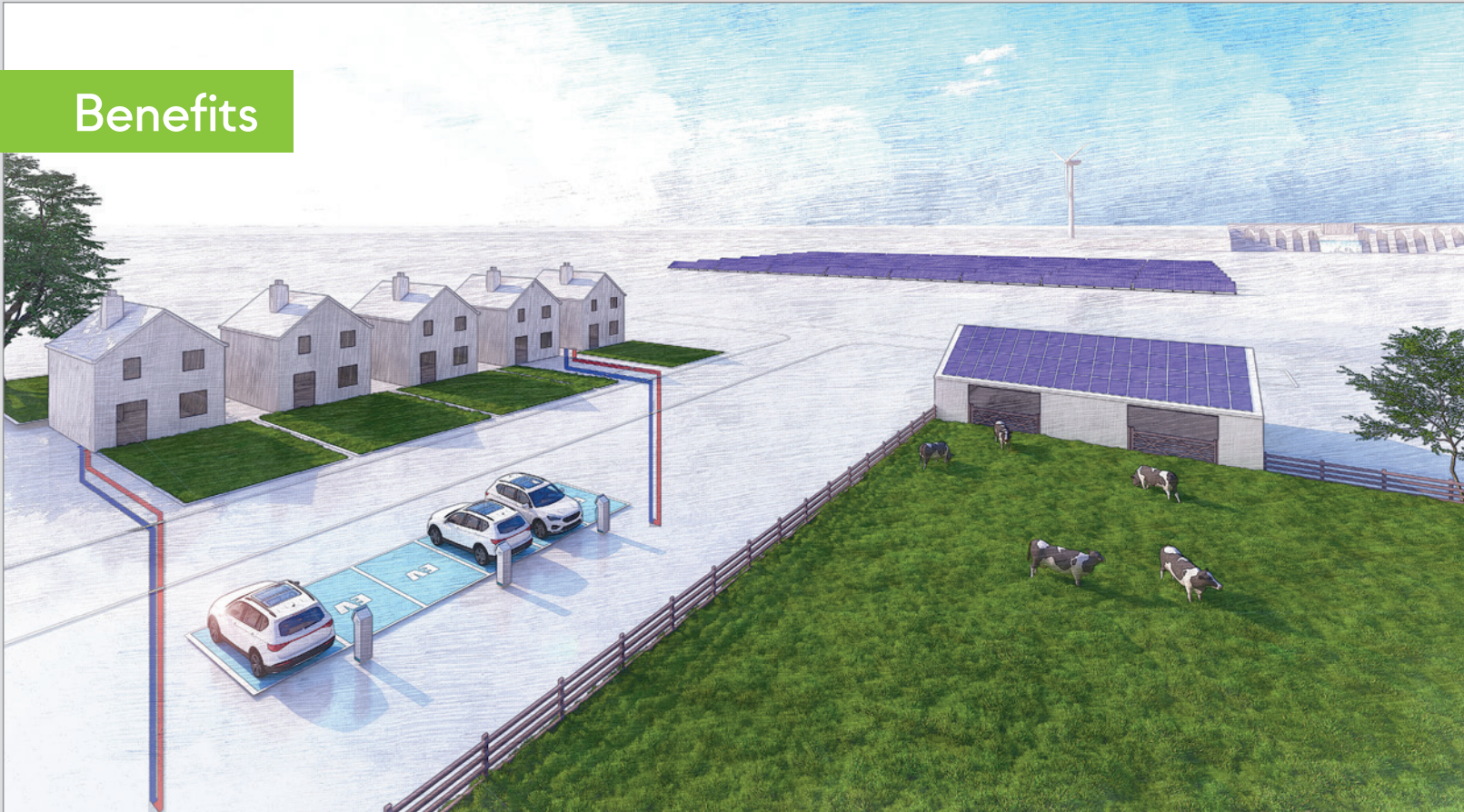
UrbanChain will manage the process and sell the electricity to the members of the energy trading group at a fixed rate, over an agreed period of time and can offer a significant discount (20% – 30%) on Ofgem's current capped Electricity Price Cap*, as well as supporting the development of the low carbon heat network.

To become a member of the Peer-to-Peer community energy trading group you will **not** need to have a heat pump installed and could also be a local business. Once part of the energy trading group you will buy your electricity in much the same way you would from your current electricity supplier.

Established in 2017, UrbanChain is the leading provider of Peer-to-Peer energy exchange services in the UK and are currently managing +200GWh of renewable energy exchange. That is equivalent to the annual electrical consumption for around 68,000 homes.

*Based on the electrical unit costs that Ofgem use to set their price cap (Aug 23).

Benefits

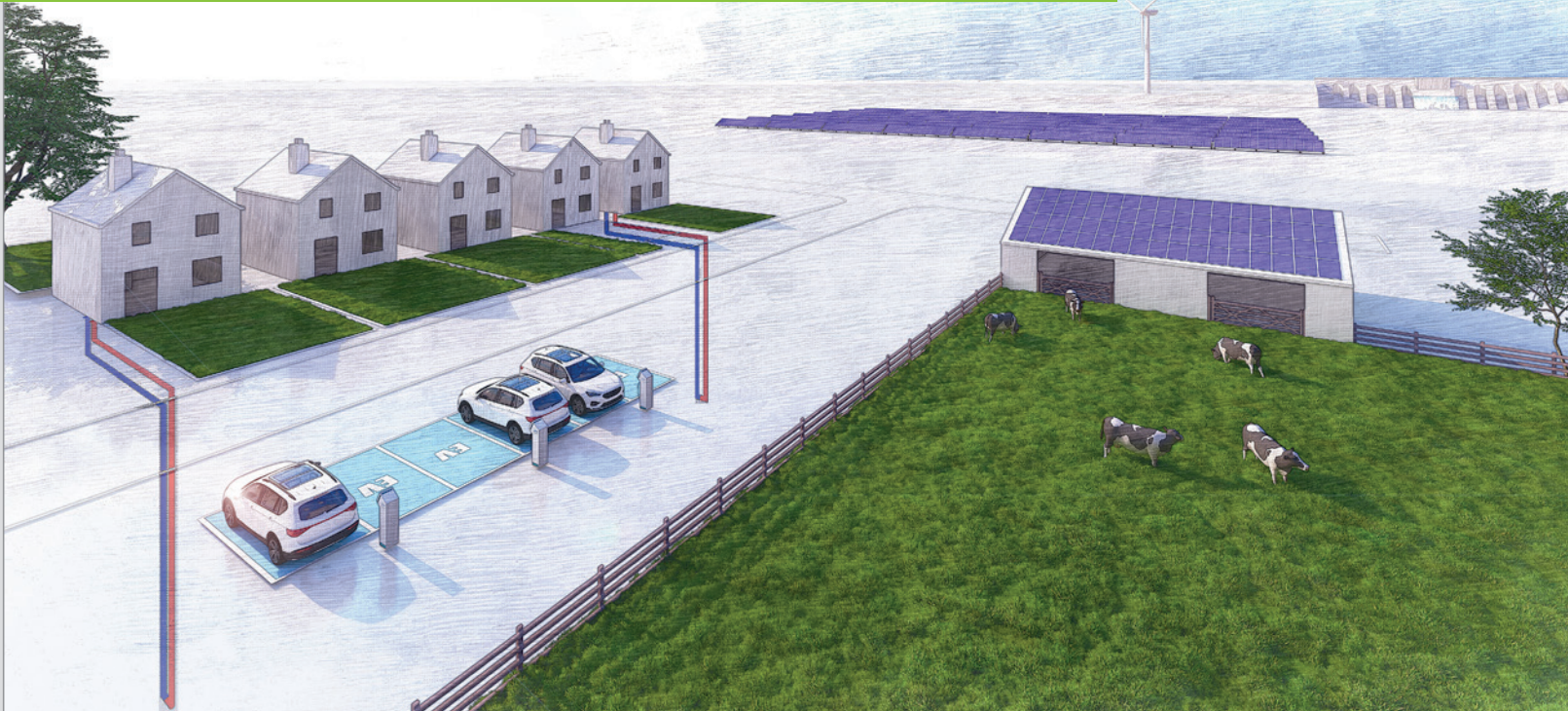


The project offers property owners and energy consumers the following benefits:

- ✓ No requirement for the homeowner to pay the capital costs for the borehole.
- ✓ A pathway to lower energy costs
 - Potential 20-30% discount on Ofgem's current Electricity Price Cap*.
 - Improved heat pump efficiency over the coldest months of the year, by comparison to an air source heat pump.
- ✓ Lower carbon emissions than oil or LPG boilers.
- ✓ Reduced exposure to future energy price increases.
- ✓ An alternative to an electric boiler or electric radiators if it is not possible or practical to install an air source heat pump.
- ✓ A low carbon community heat option for those living outside of a village or settlement.

*Based on the electrical unit costs that Ofgem use to set their price cap (Aug 23).

The benefits of community scale solutions



By developing the project at a community scale, Net Zero Communities can:

- ✓ Access economies of scale. For example, approximately 30% of the cost of drilling a borehole is associated with getting the borehole rig to site. By installing multiple boreholes, we can reduce the cost per borehole.
- ✓ Reduce project costs by replicating a standardised approach across multiple communities.
- ✓ Reduce project risks, by developing targeted local energy clusters where there is demand, and then expanding those clusters as demand grows.

This approach is harder to achieve through traditional village wide heat networks.

- ✓ Benefit from longer term, lower cost finance. With a life expectancy of at least 75 years, the community owned boreholes will form long-life infrastructure assets.
- ✓ Offer a more inclusive approach, to ensure that all properties can join the network if they would like to, even if properties are some distance from their nearest neighbour.