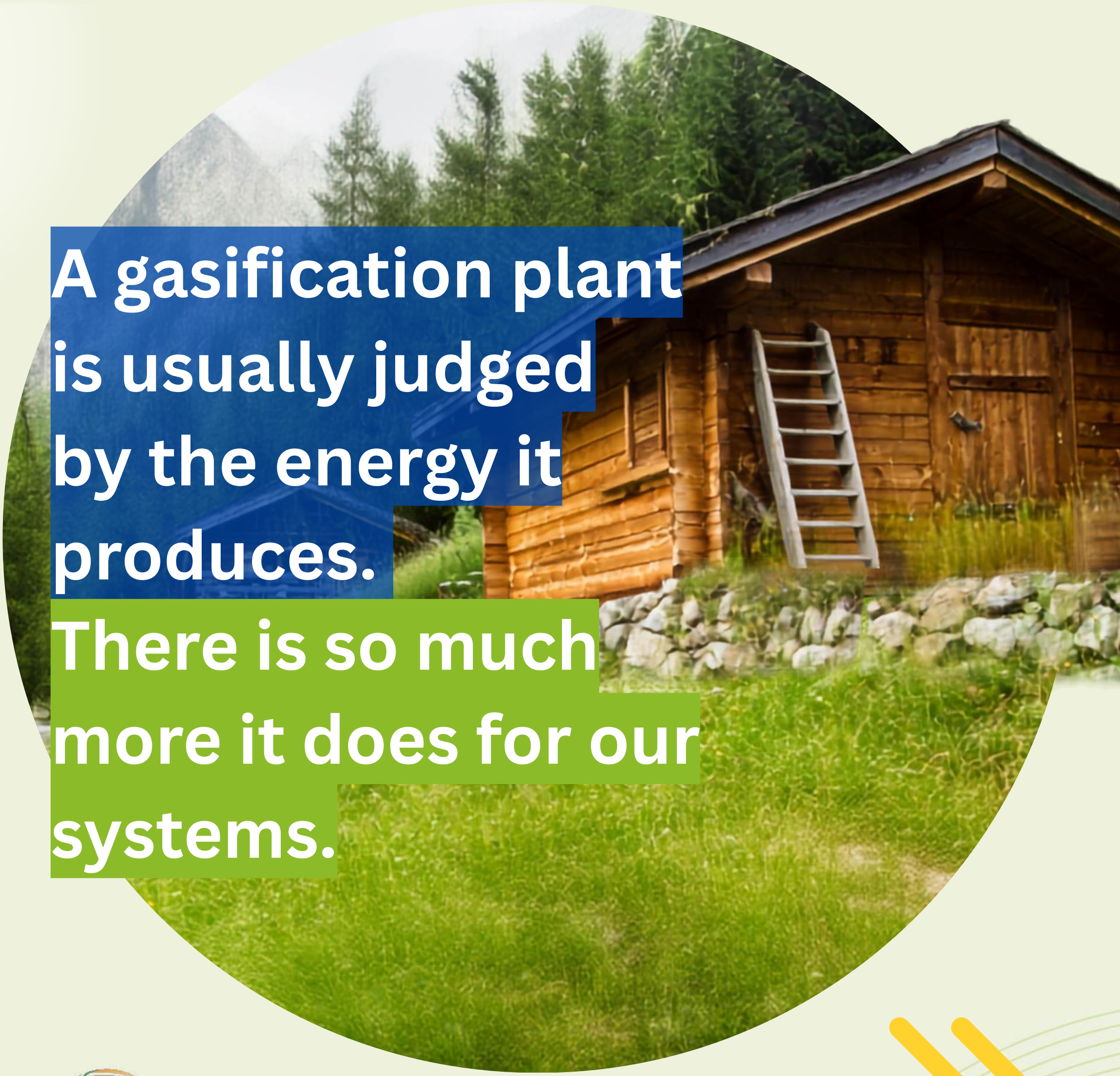
FOOD RESOURCES HOME HEALTH COMMUNITY



A gasification plant is usually judged by the energy it produces.

There is so much more it does for our systems.

IEA Bioenergy
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Instead of asking how much energy, IEA Bioenergy researchers raised a different question: what a society needs to be secure.

Energy is only one of the contributions gasification makes.

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Gasify crop and food residues, and the phosphorus, potassium, and minerals left in the ash are brought back to farmland – returning to the soil what the harvest took out.

Food & feed security

A sawmill's own offcuts become the gas that powers it. Wood, bark, and paper reject that had nowhere to go now run the operations that produced them.

Biobased material

Ecosystem resilience

Bark-beetle-killed timber is dry, abundant, and a fire hazard. Gasification gives its removal a purpose – using the fuel that drives catastrophic wildfires.



Biochar from waste wood, turned into activated carbon, filters micropollutants and pharmaceuticals from drinking water – a local filter made from local waste.

Biosecurity & health protection

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Critical infrastructure resilience

Sewage sludge is one of the hardest things a city has to handle. Gasified, it powers the treatment plant itself and could concentrate scarce phosphorus for recovery.

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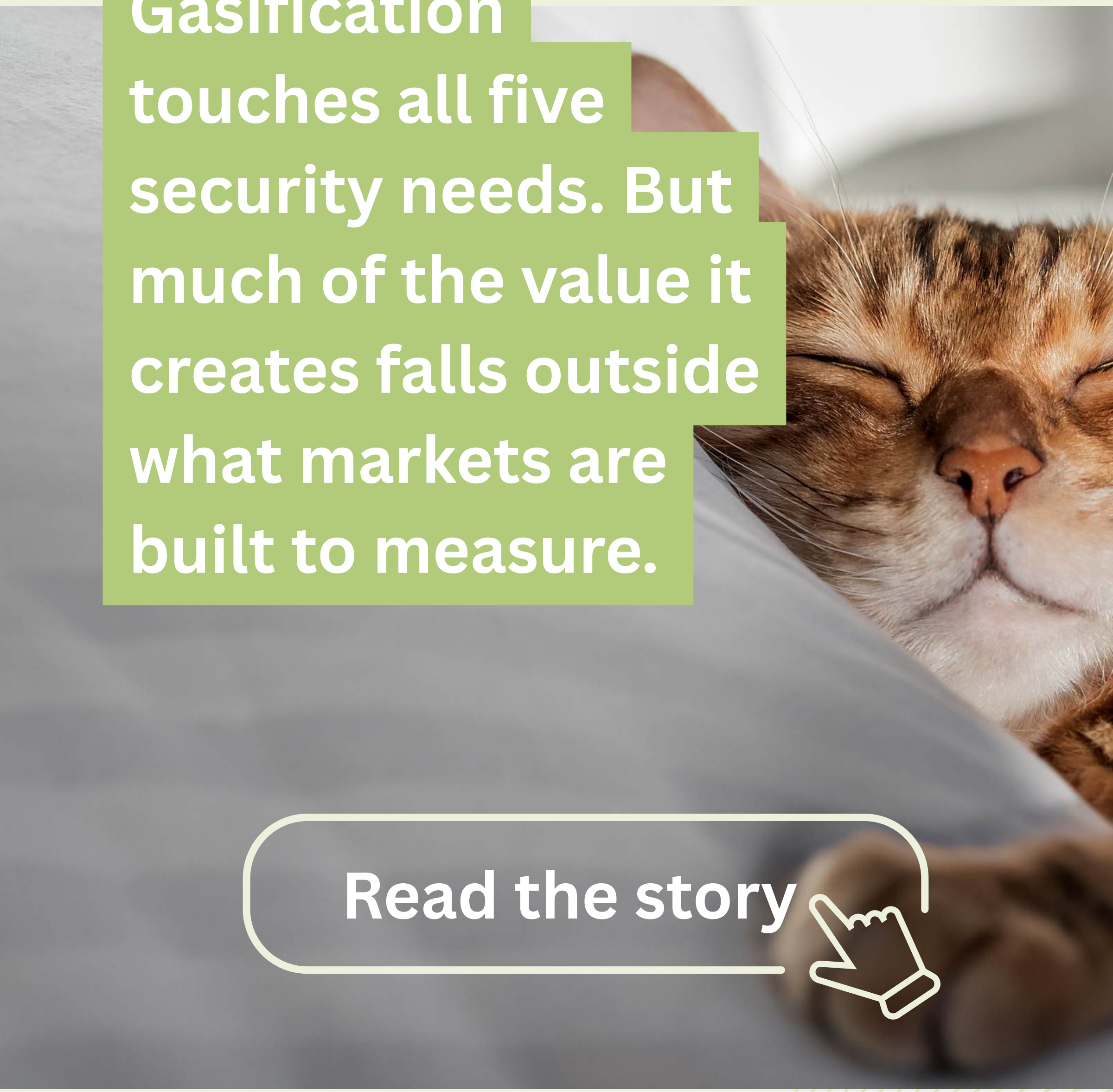
"The same installation supports food systems through nutrient return, protects forests, filters water, and manages contaminants. The technology hasn't changed – the way we account for its value is only now catching up."

Jitka Hrbek, IEA Bioenergy Task 33

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Gasification touches all five security needs. But much of the value it creates falls outside what markets are built to measure.



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