

# Energy Transition

## Call for electricity storage and conversion Solutions



### CONTEXT

Energy systems are changing at varying rates and degrees of complexity around the globe. This change is driven by growing energy demand and an urgent need to curb emissions. A growing population with rising living standards will need more energy. At the same time, the world must find ways to reduce greenhouse-gas emissions and improve air quality. One way to do this is by changing the mix of electricity generators.

Electrifying our energy system will require a mix of solutions, including renewable sources such as wind and solar, to help meet rising energy demands with fewer emissions. Storing and converting the electricity generated by renewable sources mitigates the intermittency from wind and solar.



### WHAT WE ARE LOOKING FOR

We seek safe and cost-competitive technologies to store energy and balance the intermittent supply and demand from renewable power sources. In addition, we seek sustainable battery life-cycles solutions using recyclable components, cheaper green hydrogen production solutions to compete with conventional methods, and solutions to efficiently and safely transport energy to where and when its needed.

### IN SCOPE

- Solutions to reduce costs associated with the balance of plant of batteries (e.g. corrosion-resistant materials, inverters, sensors).
- Sustainable battery technologies, with designs that are easy to recycle.
- Supply chain solutions to transport hydrogen safely and efficiently around the world.
- Disruptive solutions to generate green cost competitive hydrogen at small or large scale.

### OUT OF SCOPE

- Concentrating solar power
- Manufacturing solutions for turbines and panels
- Li-ion and lead-acid battery concepts, flywheels
- Concepts integrating hydropower
- Blockchain solutions
- Specific smart apps

## **HOW TO SUBMIT YOUR PROPOSAL**

- This Call for Solutions was part of a collaboration between Shell GameChanger, the Chamber of Commerce and the [Global Entrepreneurship Summit](#) (June 4 – 5, 2019).
- For questions contact [GameChanger-Solutions@shell.com](mailto:GameChanger-Solutions@shell.com)

## **WE APPLY THE FOLLOWING CRITERIA FOR CONSIDERATION:**

1. Novel – Is the idea fundamentally different and unproven?
2. Valuable – Could the idea create substantial new value if it works?
3. Doable – Is there a plan to prove the concept quickly and affordably?
4. Relevant – Is the idea relevant to the future of energy?