



Accelerating green hydrogen solutions

- Open Compute Project 2022

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Transition to clean energy

- No single or simple solution for reaching the targets of decarbonization





Decarbonization requires a two-folded strategy

Make existing industry more sustainable



Enable the transition to clean energy and circularity



Alfa Laval's sustainable offering





Accelerating decarbonization through energy efficiency

Alfa Laval as a part of the Energy Efficiency Movement



Energy Efficiency Movement

An open-door initiative bringing stakeholders together to raise awareness and accelerate actions to increase global energy efficiency – our 'first fuel' to a decarbonized future. We just need to make it happen, together!

Join us and be part of the solution! www.alfalaval.com/energyefficiencymovement





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Heat transfer optimization across the value chain



- Green hydrogen production:
 - Electrolyser cooling
 - Process water desalination
 - Post-treatment cooling
 - Plant cooling
 - Waste heat recovery
- End-use applications:
 - Hydrogen refuelling stations
 - Fuel cell development
 - Industrial use, power-to-X
 - Waste heat recovery



Green hydrogen production insights





Electrolysis generate **20-40% excess heat**. Optimized temperature control is crucial for maximizing process efficiency and ensuring equipment lifetime.



Every 10 MW electrolyser capacity needs around **50-60 m³/day of clean water**. Process water desalination is crucial to maximize electrolyser performance.



Heat transfer technology across the value chain

- enabling efficient and compact solutions





Heat transfer needs:

- 1. Electrolyte cooling
- 2. Gas cooling
- 3. Process water desalination
- 4. Post-treatment cooling
- 5. Overall plant cooling
- 6. Waste heat recovery
- 7. End-use applications

Process water generation for electrolysis



Thermal desalination with Alfa Laval freshwater generator

Desalination with conventional reverse osmosis



Green methanol as fuel to reduce carbon emissions

- Alfa Laval as investor and partner to Liquid Wind, Sweden







Making a decarbonized future a reality – with innovative heat transfer technologies

