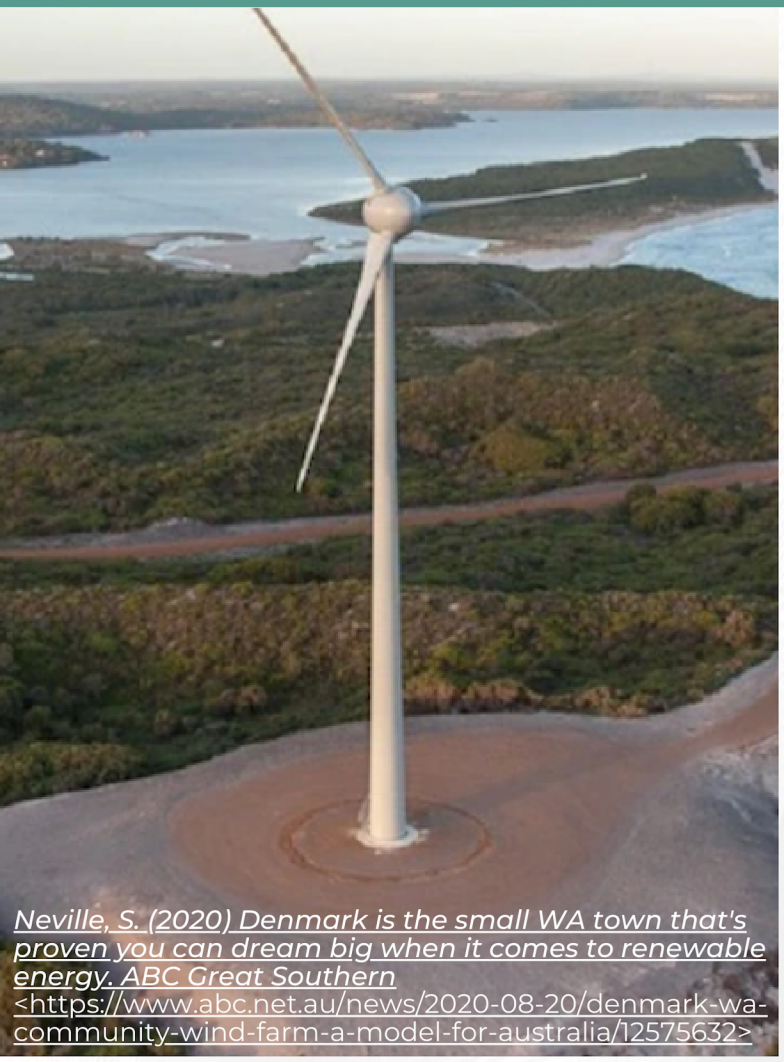
DENMARK'S JOURNEY TO TOTAL RENEWABILITY: TOTALLY RENEWABLE DENMARK

The picturesque town of Denmark has become an exemplar of community-driven renewable energy initiatives. The remarkable journey towards a greener future in Denmark is epitomised in the tale of Totally Renewable Denmark (TRD).



Neville, S. (2020) Denmark is the small WA town that's proven you can dream big when it comes to renewable energy. ABC Great Southern <https://www.abc.net.au/news/2020-08-20/denmark-wa-community-wind-farm-a-model-for-australia/12575632>

THE GENESIS: GREEN TOWN DENMARK WALPOLE PROJECT

ITRD's roots can be traced back to the Green Town Denmark Walpole project, initiated by the community and the then-Greens Member of Parliament, Paul Llewellyn. The impetus for this project was a series of grid blackouts that severely impacted local tourism and businesses, particularly during an extended blackout over Easter in 2007.

Recognising the economic and environmental challenges, the community proposed an innovative solution. They aimed to reduce energy consumption, curb peak energy demand, and produce energy locally using renewable sources. This approach not only promised to address the blackout issue but also aligned with Western Power's goal of "beating the peak" in energy demand, a cost-effective alternative to infrastructure upgrades.

Household and energy audits were conducted, and a comprehensive community education program was launched. This collective effort yielded impressive results, including a 15% reduction in energy use and a flattening of peak demand. It also deferred the need for costly infrastructure upgrades.

FROM VISION TO REALITY: THE DENMARK COMMUNITY WINDFARM

The success of the Green Town project laid the foundation for the Denmark Community Windfarm Ltd (DCW), commissioned in February 2013. DCW operates as a public company, with 116 shareholders, the majority of whom are local community members. The wind farm boasts two 800kW Enercon E48 turbines, towering at 55 meters, with a lifespan of 20-21 years.

DCW's significance lies not only in its contribution to Denmark's energy needs (40-50%) but also in its community-focused initiatives. It holds long-term contracts with Western Power and Synergy to supply power to the grid, enabling the support of a Community Sustainable Living Fund through DCW Inc. This not-for-profit community group owns a 10% share in the wind farm, which funds sustainable projects within the Shire.

CHALLENGES AND ASPIRATIONS: TOTALLY RENEWABLE DENMARK (TRD)

However, the path to renewable energy is not without challenges. Despite the initial Environmental Protection Authority approval for four turbines at the wind farm site, Western Power's voltage constraints led to the construction of only two turbines. TRD was established in 2021 with the aim of inspiring further expansion.

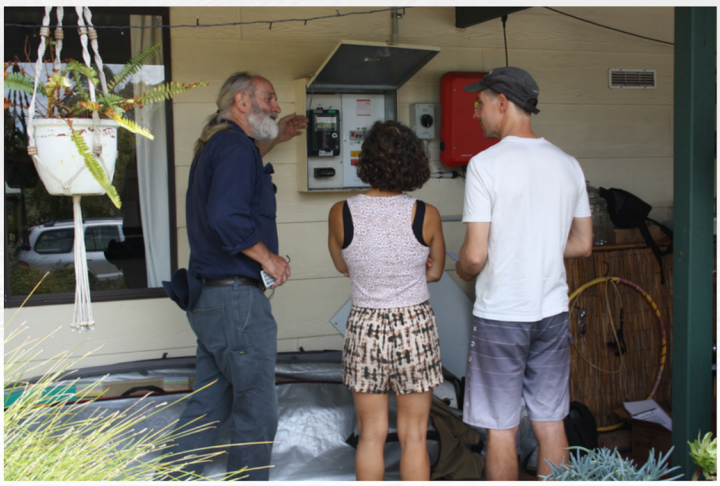
Negotiations with Western Power for the additional turbines have encountered obstacles, primarily related to the cost of upgrading poles and wires — a sticking point in the project's progress. TRD is exploring innovative solutions, including a battery bank for electric truck transport, to make better use of the available power.

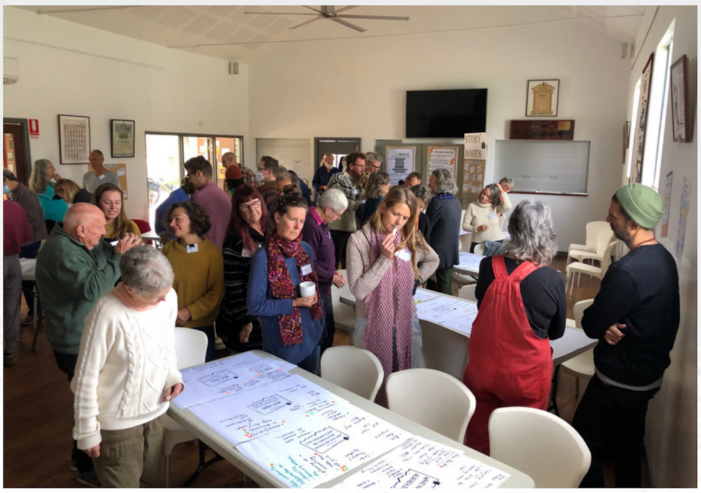
In addition to wind energy, TRD envisions a future where Denmark becomes 100% renewable across all sectors, 24/7, by 2030. Their goals include a "Reduction Revolution," electrifying everything with renewable energy, achieving low carbon emissions, generating local jobs, and inspiring action within the community and beyond.

THE PATH FORWARD: ADVOCATING FOR RENEWABLES

TRD is actively involved in community consultation, aiming to develop a comprehensive Action Plan with the support of community funding. This plan will outline the next steps, including the development of renewable energy generation, storage, and microgrid solutions.

The community of Denmark has persevered through decades of challenges, from bureaucratic hurdles to regulatory constraints. Their journey is a testament to their unwavering commitment to a sustainable future. As Western Australia explores renewable energy possibilities, Denmark's story serves as an inspiration, demonstrating that with determination, innovation, and community collaboration, a renewable future is within reach.





Denmark's transformation from grid blackouts to renewable energy leadership exemplifies the potential of community-driven initiatives to shape a sustainable future. TRD's journey serves as a model for other communities looking to embark on their renewable energy path.

An observation of TRD's journey highlights that utility providers could support the renewable energy transition through enhancing their responsiveness, reducing the cost of basic inquiries, and providing more transparent pricing mechanisms. This could potentially foster a more conducive environment for community-driven energy initiatives without fundamentally altering the existing public model.