



2020 Renewable Energy Summit

Katherine Hamilton, Chair, 38 North Solutions

January 16, 2020

We are already in a climate crisis.



(Credit: Christopher Michel/ Flickr/cc)



(Credit: VOA/Public Domain)



(Credit: bellacaledonia.org.uk)

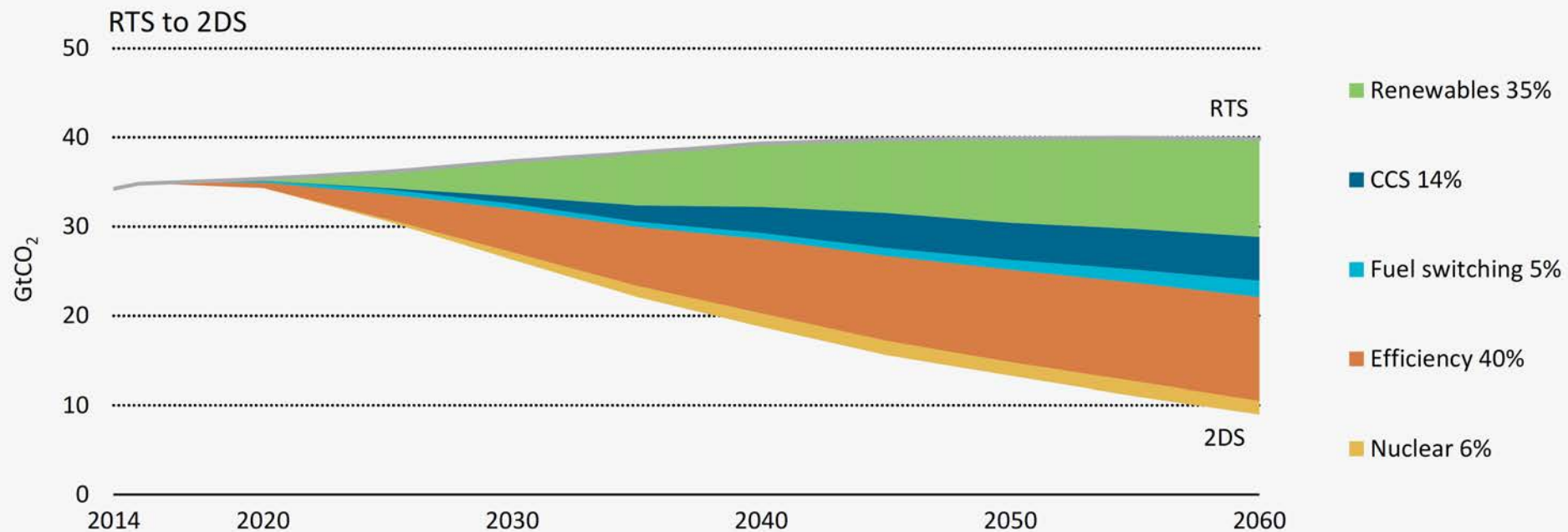
Electricity is foundational to economic growth.



Additional 1 B people
now have access.
1 B still without electricity.



Role of renewables in 2DS: IEA



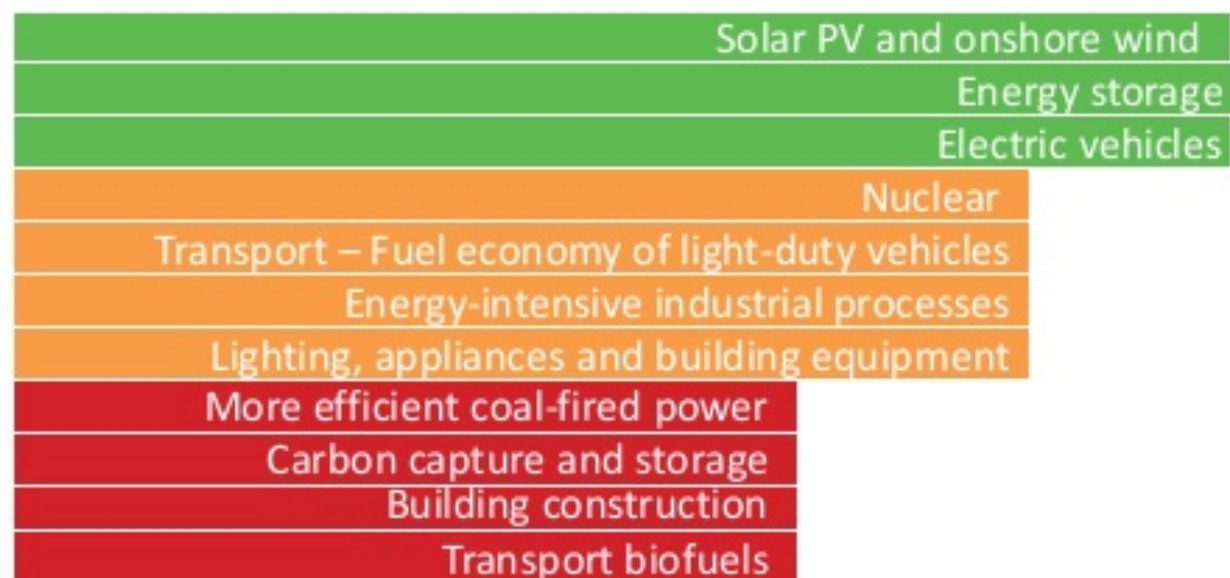
Note: GtCO₂ = gigatonnes of carbon dioxide.

Key point

Reduction efforts are needed on both the supply and end-use sides; focusing on only one does not deliver the 2DS.

Clean energy progress: IEA

The potential of clean energy technology remains under-utilised



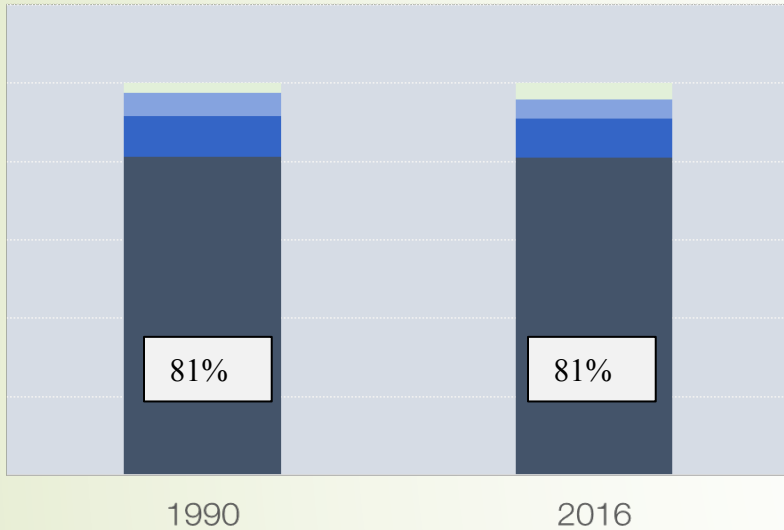
● Not on track ● Accelerated improvement needed ● On track

Recent progress in some clean energy areas is promising, but many technologies still need a strong push to achieve their full potential and deliver a sustainable energy future

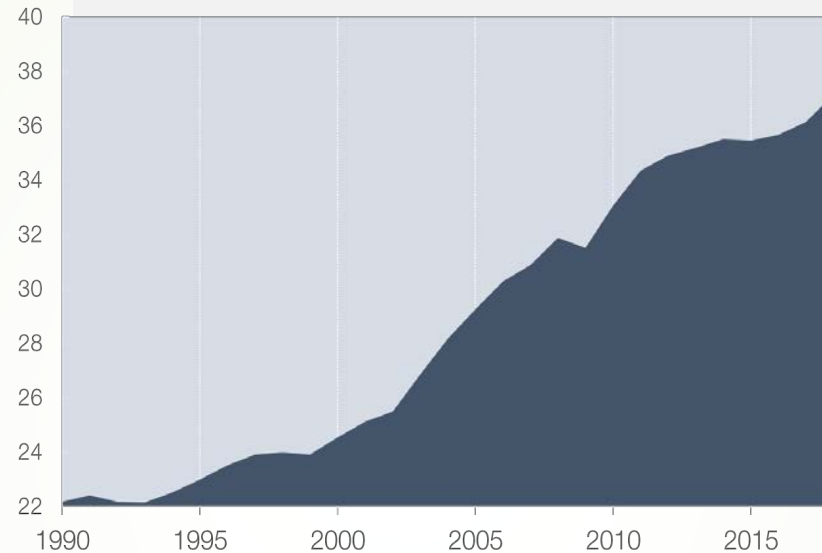
We must accelerate the speed of transition.

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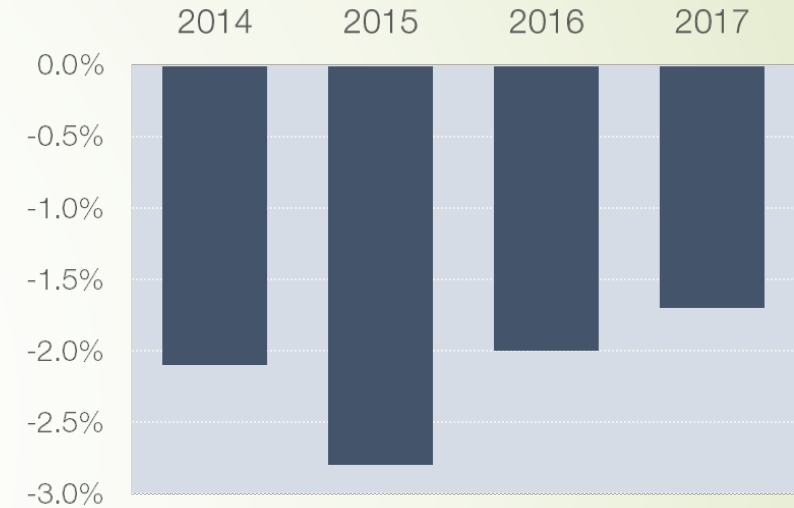
Share of fossil fuels in global energy mix is constant since 1990



Global CO2 emission from fuels increasing at a faster rate, +2.7% in 2017 (expected)



The rate of energy intensity improvements has reduced



Access to electricity gap in Africa: 600 million

Access to clean cooking fuels gap in Africa: 860 million

theguardian

We have 12 years to limit climate change catastrophe, warns UN

Urgent changes needed to cut risk of extreme heat, drought, floods and poverty, says IPCC

8 Oct. 2018

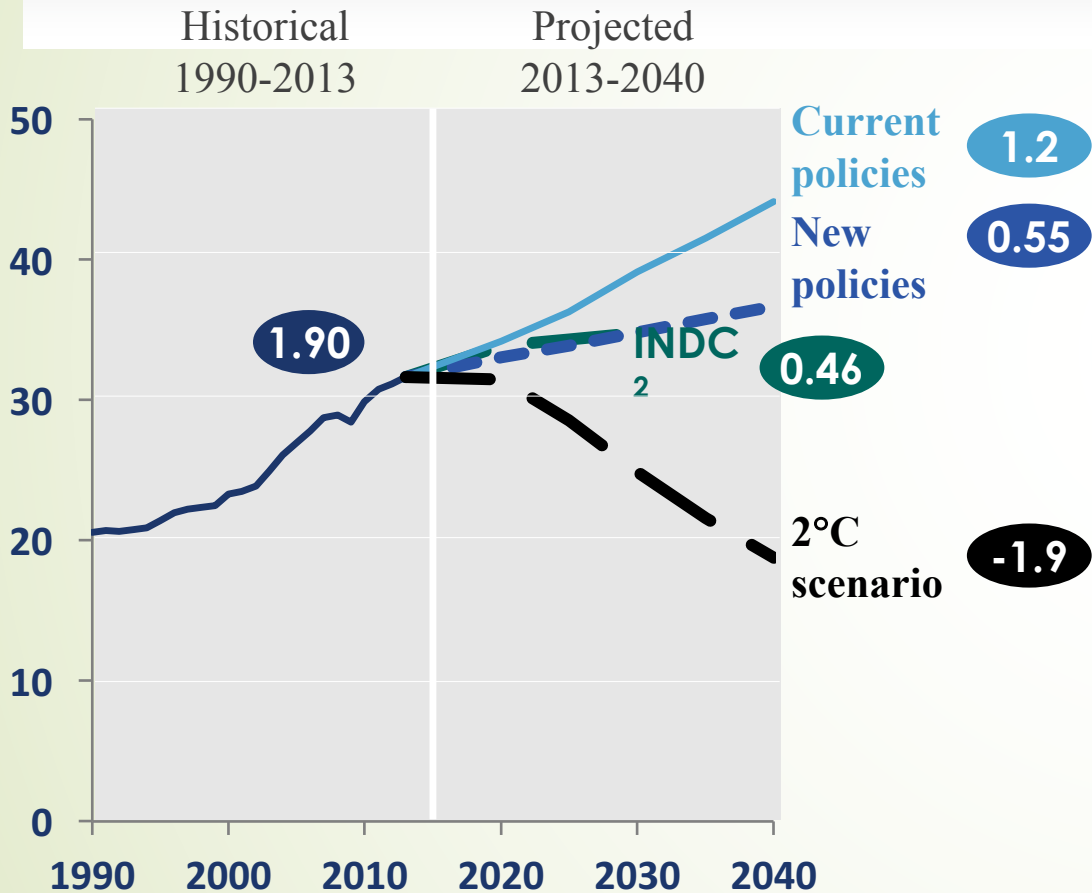
Current policy trajectory is insufficient.

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Global energy-related CO₂ emissions in IEA climate scenarios

Gt CO₂

... Average growth rate
% per annum



SOURCE: Energy Transition Commission; IEA (2014), CO₂ Emissions from Fuel Combustion; IEA (2015) World Energy Outlook; IEA (2015) World Energy Outlook Special Report on Energy and Climate Change

- To stay within the 2 degree carbon budget, emissions would have to decrease by 2% per year.
- Current and new policies under INDC targets are not sufficient to reduce emissions enough to stay within the carbon budget.
- A step-change is required to meet climate change objectives.

Signs of transition are encouraging.

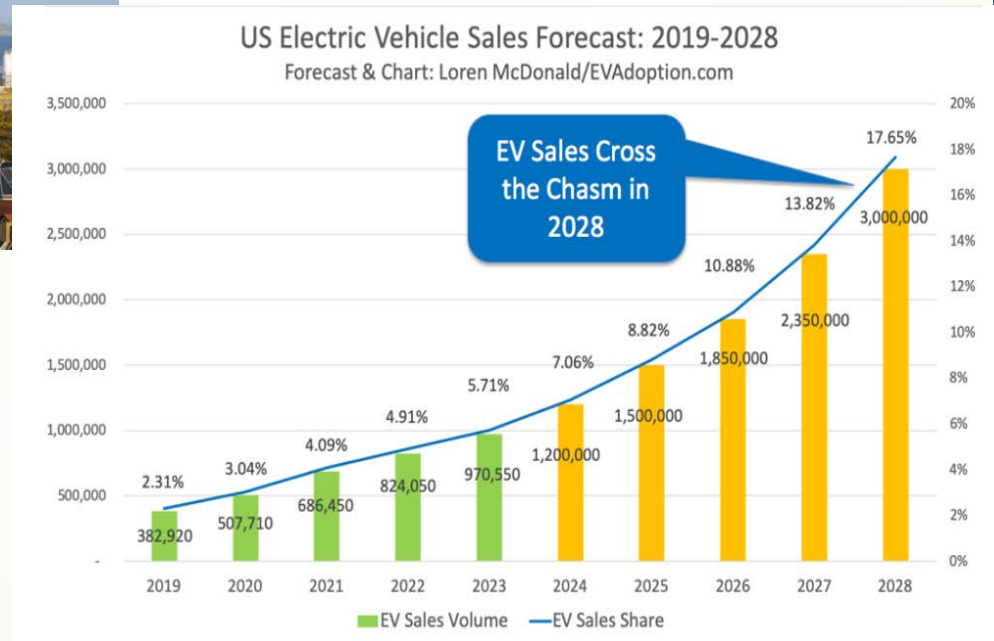
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(Credit: Irena)

Corporations purchased 13 gigawatts of renewables in 2018 with U.S. companies making up 70% of the deals.

Largest solar plus storage plant will be complete in 2021 in South Australia.



(Credit: Renewable Energy World)

Several signposts have emerged that indicate a transition may be at a tipping point: renewables and storage are cheap; customers are demanding choice; corporations are defecting from fossil fuel.

System integration is crucial.

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(Credit: Northland Pines School District)



(Credit: wuwm.com)



(Credit: Siemens)

To ensure clean energy is efficiently and fully utilized, it will be critical to tie together customer as well as grid resources with smart technologies and communications.



(Credit: Lori Wolfe/Herald-Dispatch)



(Credit: Conservation Alliance)



(Credit: Madison.com)

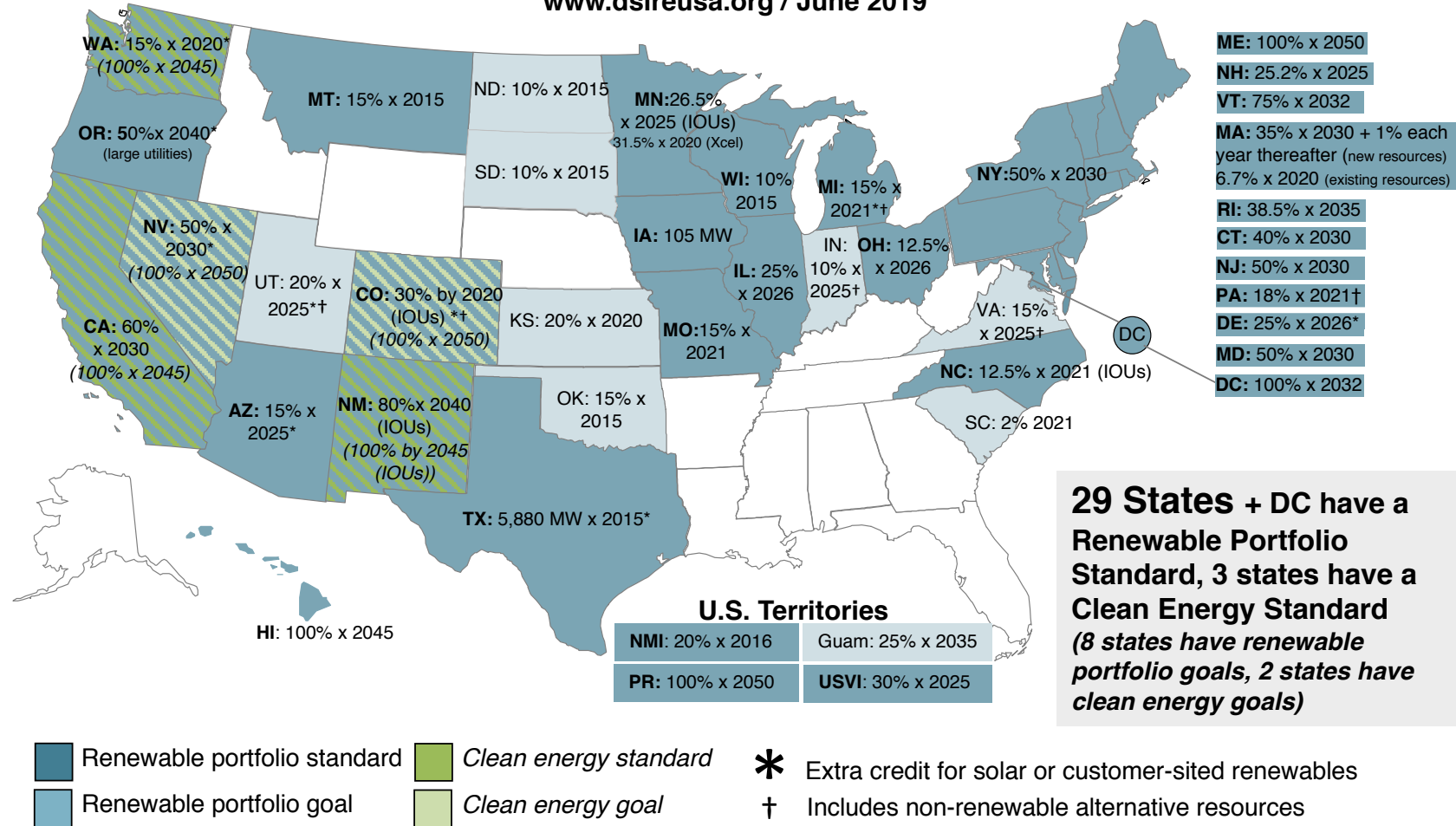
We must be thoughtful and intentional in bringing along all communities—in developing or developed economies—into energy transition.

U.S. Federal policy landscape.

- Ceding international leadership on climate change.
- Executive action circumventing Congressional process in regulation.
- House of Representatives actively discussing policy for climate change.
- Politicians feeling grassroots pressure to act.
- Incremental action still possible.

Renewable & Clean Energy Standards

www.dsireusa.org / June 2019



States to watch.

- ▶ California—utilities, CCA's, and resilience
- ▶ Hawaii—Performance Based Rates
- ▶ Virginia—new opportunities for clean energy policy
- ▶ Minnesota—what 100% means from utility
- ▶ Michigan—will renewable competition be allowed
- ▶ Colorado—what securitization model looks like
- ▶ Wisconsin!

Wisconsin is headed in the right direction.

- Governor Evers' Executive Orders on energy and climate.
- Potential regulatory and legislative shifts.
- Steady march of solar and wind projects, jobs.
- Investment in EV infrastructure.
- Incumbents grappling with change.

Gnarly issues are common to all.

- ▶ How do we talk about climate change and renewables?
- ▶ How do we think about state versus federal policies?
- ▶ How do we accelerate deployment of EVs and charging infrastructure?
- ▶ Who manages the customer relationship and how do we allow for choice and access for all?
- ▶ How do we incentivize collaboration of utilities and third parties?
- ▶ Will the utility survive in its current construct; will there be new performance metrics and/or new ways to monetize assets?

Folks really want renewables...

- 100+ cities
- 100+ of private companies and investors, including BlackRock
- Utilities—Xcel, AEP, GMP

74%	think we should use solar “as much as possible”
70%	agree that “In the near future, we should produce 100% of our electricity from renewable energy sources such as solar and wind”

*“Renewable energy is never depleted, **it’s always there**. Easily sourced and easily replaced.”*
— Minneapolis

*“We need to get **off fossil fuels**.”*
— Phoenix

(Source: Vox)

75% Trump supporters
Accelerate
deployment
and use of clean
energy

(Source: Public Opinion Strategies)

How can we make a difference?



(Credit: Time.com)

Advocacy on all levels.



(Credit: Isthmus.com)





“

You cannot get through a single day without having an impact on the world around you. What you do makes a difference, and you have to decide what kind of difference you want to make.

”

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Jane Goodall

Everyone has a part to play.

**Thank you for inviting me to be a part of
your transition!**

Questions?