



Oklahoma
Sustainability
Network

economy,
ecology,
equity



SPEER Member Workshop October 2019

Montelle Clark -
OSN Energy Policy Director

What is OSN?

- Established 1999.
- Registered 501(c)(3)
- Managed by volunteers.
- No employees, no office.
- We do have a PO box!
(but we can't find the key)
- Facebook, Twitter
- **New website**



<http://oksustainability.org>

Texas vs Oklahoma - What we share.



Keith Allison from Hanover, MD, USA - James Harden, CC BY-SA 2.0



Keith Allison from Hanover, MD, USA - Russell Westbrook, CC BY-SA 2.0

Why do we keep letting Texas have our most exciting NBA players? It's just wrong.

	2010	2011	2012	2013	2014	2015	2016	2017
TX	9	18	11	16	8	21	-	-
OK	41	63 (5.7)	34	103	585	888	623 (5.8)	302

Can anyone tell me what this data represents?

Magnitude 3.0+

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Texas & Oklahoma - Building Codes

- RESIDENTIAL -

TX: 2015 IECC

OK: 2009 IECC with amendments

(OUBCC adopted 2015 IRC, but they amended the EE chapter back to 2009 standards.)

- COMMERCIAL -

TX: 2015 IECC and 90.1-2013

OK: 2006 IECC and 90.1-2004

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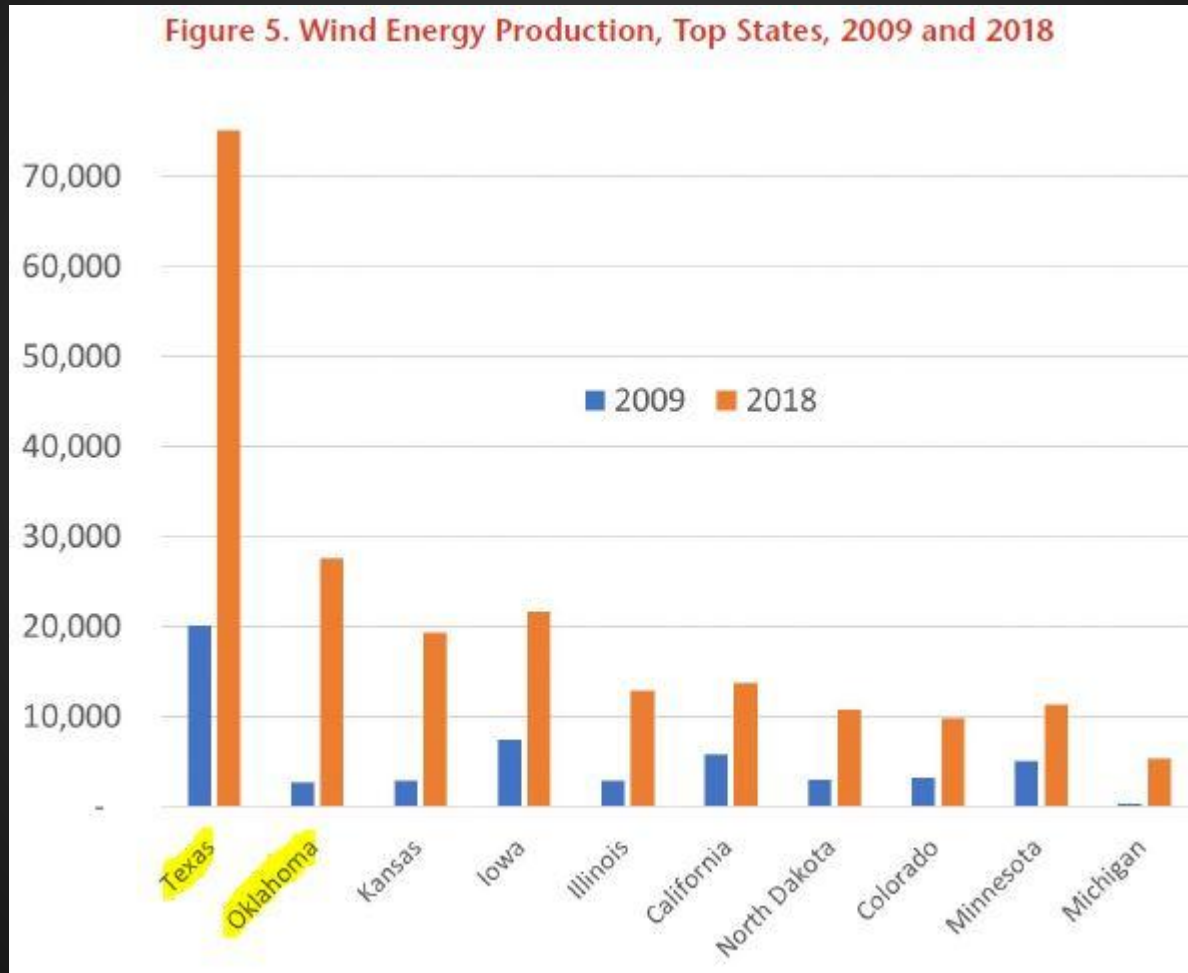
TX: 2015 IECC and 90.1-2013

OK: 2006 IECC and 90.1-2004



We don't like to get in a hurry in Oklahoma. Let 48 or 49 other states try it first.

Wind Power!



"Renewables on the Rise 2019" - Environment America, August 2019

Wind Power!

Table 7. Top 10 States by Wind and Solar Generation as Percentage of Electricity Consumption¹²⁶

State	Wind and Solar Generation as Percentage of Electricity Consumption (2018)	Rank
North Dakota	54%	1
Kansas	47%	2
Oklahoma	44%	3
Iowa	43%	4
New Mexico	32%	5
Wyoming	25%	6
South Dakota	22%	7
Maine	22%	8
California	21%	9
Colorado	21%	10

Wind Power! Two major announcements.

‘Cheaper Than a Peaker’: NextEra Inks Massive Wind+Solar+Storage Deal in Oklahoma

NextEra will build a combined 700 megawatts for an electric cooperative group in a landmark deal for the hybrid renewables sector.

JULIAN SPECTOR | JULY 25, 2019
Greentech Media

- Western Farmers Electric Cooperative (WFEC). Based in Anadarko.
- G&T for more than 20 OK co-ops, primarily smaller towns and rural areas.
 - 200 megawatts of storage - four hours on a full charge.
 - 250 megawatts of wind capacity
 - 250 megawatts of solar power
- *When completed in 2023, WFEC will produce about half of its power from RE.*

Wind Power! AEP - PSO & SWEPCO

Public Service Co. of Oklahoma joins sister utility to propose significant wind development across north-central Oklahoma

by JACK MONEY

The Oklahoman

Published: Tue, July 16, 2019

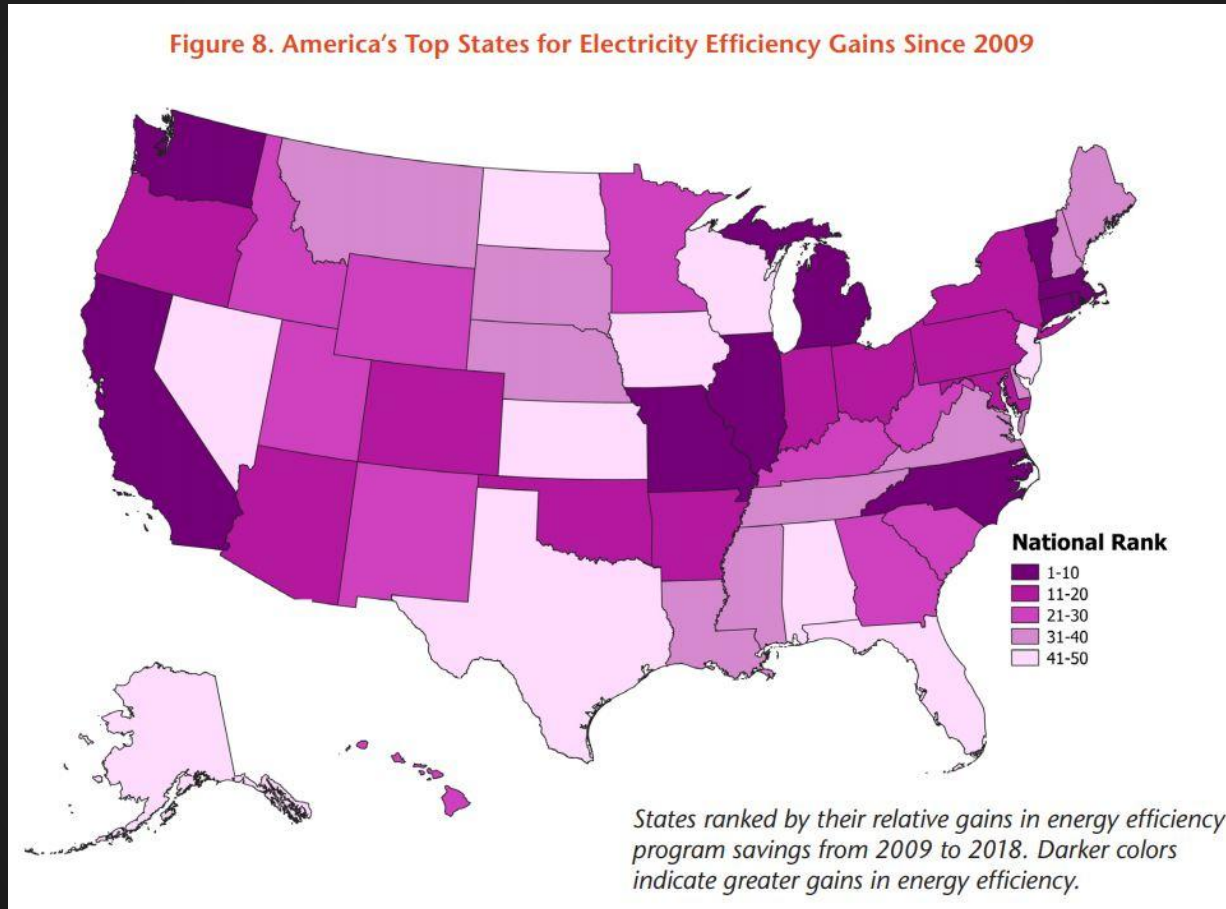
- **OK, TX**, AR, LA approval (but OK could take most of it).
- \$2 billion project. 534 turbines. 1,485 MW (three facilities).
- One of the farms at **999** MW. Seriously? They couldn't find 1 extra MW?
- 5,724 GWh/yr total - enough energy for @ **440,000** residential customers.
- Not in the panhandle, **so no transmission line required**.
- Wind Catcher was vigorously contested by Natural Gas interests.
- C-B analysis includes avoided carbon costs ("CO2 dispatch burden").
- **OSN has entered the case.**

Energy Efficiency - Jobs!



"Energy Efficiency Jobs in America" - E4TheFuture, [September 2019](#)

Energy Efficiency - Savings!



"Renewables on the Rise 2019" - Environment America, August 2019

Energy Efficiency in Oklahoma

• Where we were - 2008 •

ACEEE 2008 State Scorecard

(Utility and Public Benefits Programs and Policies)

Nebraska	0.5	0	0	0	0	0.5	39
Michigan	0.5	0	0	0	0	0.5	39
South Dakota	0.5	0	0	0	0	0.5	39
North Dakota	0.5	0	0	0	0	0.5	39
Alaska	0	0	0	0	0	0	43
Alabama	0	0	0	0	0	0	43
Mississippi	0	0	0	0	0	0	43
Missouri	0	0	0	0	0	0	43
Delaware	0	0	0	0	0	0	43
West Virginia	0	0	0	0	0	0	43
Louisiana	0	0	0	0	0	0	43
Oklahoma	0	0	0	0	0	0	43
Wyoming	0	0	0	0	0	0	43

Bottom of the chart. Oklahoma tied for last. *Program budgets: \$0*

Energy Efficiency in Oklahoma

Where we are now - 2018

- @ 28th on ACEEE State Scorecard (Utility Programs and Policies)
 - Total Spending: **\$82.3 million**
- @ 18th for support of low-income EE programs.

Where we are going - 2019-2021

- New 3-year portfolios approved.
- Energy Savings @ **1%** annually (AEP-PSO)

Energy Efficiency in Oklahoma - 2019-2021

- Mostly standard programs - Weatherization, New Homes, Energy Star, Commercial Custom, Demand Response, etc.
 - *Interesting measures at PSO* -
 - Green Appraiser Training
 - Rebates for Level 2 Chargers and pre-wiring of new homes.*
 - *Interesting R&D projects at OG&E* -
 - Utility-scale battery pilot (at distribution system level).
 - Managed EVSE technology pilot (TOU charging, V2G, etc.)
 - Geo-targeted neighborhood behavior pilot.

* Specifically requested by OSN.

Energy Efficiency in Oklahoma - 2019-2021

Beneficial Electrification - Rejected!

- PSO proposed R&D program for customers to switch from diesel or propane:
 - Forklifts, airport luggage tugs
 - transport refrigeration units
 - truck stop electrification
- **Very cost-effective** (due to increased revenue). 3.44 on TRC test.
- OSN supported. Attorney General opposed.
- **Commission staff supported concept, but not with DSM funds.**
- “Load-building.” “Fuel switching.” Which brings me to . . .

Energy Efficiency in Oklahoma - 2019-2021

CHALLENGES

- **Fuel switching** prohibited for electric utilities (but not gas utilities).
 - *So no rebates for gas customers to switch to **Heat Pumps**.*
 - *But, 40% of Oklahoma households rely on **electricity as their primary energy source for home heating** (EIA data).*
- **RIM test**
 - One of five C-E tests in CA Standard Practice Manual.
 - New emphasis from OK Attorney General.
 - AG doesn't believe DSM reduces **system costs**.
 - > *Therefore not cost-effective for non-participants.*

Energy Efficiency in Oklahoma - 2019-2021

CHALLENGES

- **Lost Net Revenue** -
 - Many years of disagreement between utilities and OCC staff.
 - Notoriously difficult to calculate.
 - So, rulemaking opened last year.

Energy Efficiency in Oklahoma - 2019-2021

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SUBCHAPTER 41. DEMAND PROGRAMS [REVOKE]

165:35-41-1. Purpose [REVOKE]

~~The purpose of this subchapter is to establish fair and reasonable rules for planning and implementation of Demand Programs that may receive cost recovery treatment from the Commission. The rules in this Subchapter shall apply to Demand Portfolios having program years that begin on January 1, 2016 and thereafter.~~

165:35-41-2. Goals [REVOKE]

~~(a) The goals of Demand Programs are to:~~

~~— (1) Minimize the long-term cost of utility service;~~

Energy Efficiency in Oklahoma - 2019-2021

CHALLENGES

- **Lost Net Revenue -**
 - Many years of disagreement between utilities and OCC Staff.
 - Notoriously difficult to calculate.
 - So, rulemaking opened last year.
 - Meanwhile, settlements reached in utility DSM cases.
 - PSO happy, OG&E not happy.
 - DSM rulemaking withdrawn > but . . .
 - OG&E wants the programs curtailed, and
 - AG and Staff want a specific DSM rulemaking this year.
 - Could happen.

Clean Energy in Oklahoma - OSN

Policy and OSN

How OSN tries to help

Cost-Benefit analysis:

Define, quantify, and monetize the Cost-Benefit components that are usually left out of the calculations ("externalities").

- Water savings
- Avoided emissions and Public Health benefits
- Avoided risk (e.g., stranded assets, EPA compliance, etc.)
- Discount rate and Societal Value > *Societal Cost Test*
- Carbon costs

Notoriously difficult to monetize.

Clean Energy in Oklahoma - OSN

Policy and OSN

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- ✓ Water savings
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- ✓ Avoided risk (e.g., stranded assets, EPA compliance, etc.)
- ✓ Discount rate and Societal Value > *Societal Cost Test*
- ✓ Carbon costs

Can we at least use checkboxes for bonus credit?

> *Maybe call it "qualitative consideration".*

Clean Energy in Oklahoma

Policy and EPA

Help from EPA - July 2019 report:

Public Health Benefits per kWh of Energy
Efficiency and Renewable Energy in the United
States: A Technical Report



Clean Energy in Oklahoma

Policy and EPA

Help from EPA - July 2019 report:

Public Health Benefits **per kWh** of Energy Efficiency and Renewable Energy in the United States: A Technical Report



- EE is valued at **2.31 - 5.23 cents/kWh** (3% discount rate) in OK.
- Similar range for **Renewables**.

Clean Energy in Oklahoma

Policy and EPA

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Public Health Benefits **per kWh** of Energy Efficiency and Renewable Energy in the United States: A Technical Report



- EE is valued at **2.31 - 5.23 cents/kWh** (3% discount rate) in OK.
- Similar range for Renewables.
- **Range based on low/high sensitivity of people to changes in PM2.5 levels and ozone.**

Clean Energy in Oklahoma

Policy and EPA

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- Slightly lower for Texas: **1.58 - 3.58 cents/kWh**.

Clean Energy in Oklahoma

Policy and EPA

Help from EPA - July 2019 report:

Public Health Benefits **per kWh** of Energy Efficiency and Renewable Energy in the United States: A Technical Report



- Slightly lower for Texas: **1.58 - 3.58 cents/kWh**.
 - *Does NOT include CO2 climate and welfare impacts.*
 - *Also doesn't include **water** savings value.*

Clean Energy in Oklahoma

Policy and OSN

“Your absence will be noted.”

Thank You

Montelle Clark

Oklahoma Sustainability Network

[facebook.com/oksustainability](https://www.facebook.com/oksustainability)

<http://oksustainability.org/>

Twitter: @OKsustain

