

**CITY OF TRUTH OR CONSEQUENCES  
PUBLIC UTILITY ADVISORY BOARD  
MONDAY, DECEMBER 20, 2021**

**MINUTES**

**REGULAR MEETING**

Regular meeting of the Public Utility Advisory Board of the City of Truth or Consequences, New Mexico to be held in the City Commission Chambers, 405 W. Third, Truth or Consequences, New Mexico, on Monday, December 20, 2021 at 3:30 pm.

**CALL TO ORDER:**

The meeting was called to order by Chairman Szigeti.

**ROLL CALL:**

George Szigeti, Chairman  
Jeff Dornbusch, Vice-Chairman  
Ron Pacourek, Member  
Gil Avelar, Member  
Don Armijo, Member

**ALSO PRESENT:**

Bruce Swingle, City Manager  
Traci Alvarez, Assistant City Manager  
Bo Easley, Electric Department Head  
Sonya Williams, Utility Department Manager  
Jesse Cole, Water/Wastewater Department Head  
Dawn C. Barclay, Deputy City Clerk

**1. APPROVAL OF AGENDA:**

Vice-Chairman Dornbusch made a motion to approve the agenda. Member Pacourek seconded the motion. Motion carried unanimously.

**2. APPROVAL OF MINUTES:**

- a. Regular meeting of November 15, 2021.

Member Pacourek made a motion to approve the November 15, 2021 minutes. Chairman Szigeti seconded the motion. Motion carried unanimously.

### **3. COMMENTS FROM THE PUBLIC:**

**Ariel Dougherty** – Presented her opinion based on her submitted handout to the board, which has been made part of these minutes.

**Ron Fenn** – Presented his opinion based on his submitted handout to the board, which has been made part of these minutes.

**Willow Sage Dixon** - Voiced her concerns in regards to the City solar production restrictions.

**Jesus Escalera** - Energy Consultant for Rocky Solutions, expressed he was in favor of Ron Fenn's opinions and thought the City needed to take those ideas into consideration when making the recommendations for Ordinance No. 664.

**Jon Biemer** – Presented a handout to the board. Trying to stay within his 3 minutes, he spoke about his "Conclusions" that were stated in his handout which has been made part of these minutes.

### **4. OLD BUSINESS:**

#### **a. Discussion/Action: Recommendation of Amendments to Ordinance No. 664 – Customer Generated Renewable Energy. George Szigeti, Chairman**

Chairman Szigeti began discussing the results from his meeting with Hank Adair, Head of Electric Department, for Farmington, NM, sharing his suggestions to revamp the proposal for Ordinance No. 664. Some of the topics discussed in detail were;

- Bateman Act.
- Procurement Codes.
- Calculating refunds on a yearly basis, true-up after the December billing, this will help offset summer usage.
- Cap on refund for each month's usage. (\$20.00)
- Large utility companies were not addressed in the original proposal.
- Discussed "Avoided Costs".
- Discussed Sierra Electrics calculation formula.
- City Manager Swingle reminded the board, to keep in mind the Anti-Donation Clause issue.

Chairman Szigeti noted after the motion, he will redraft Ordinance No. 664 and he will present it back to the Public Utility Advisory Boards at the next meeting.

**Chairman Szigeti made a motion to reformat Ordinance No. 664 to accommodate these said changes; to place all solar customers in the same category, and to pay them the "Avoided Cost" for their net production and to calculate the "Avoided Cost" on an annual basis. Member Pacourek seconded the motion. Roll call vote was taken.**

**Don Armijo, Member – Voted Aye**

**Gil Avelar, Member – Voted Aye**

**Ron Pacourek, Member – Voted Aye**

**Jeff Dornbusch, Vice-Chairman – Voted Aye**

**George Szigeti, Chairman – Voted Aye**

**Motion passed in favor, with a 5 to 0 vote.**

**5. NEW BUSINESS:**

- a. **Discussion/Action: Reschedule the Public Utility Advisory Board's Regular Meeting for January 2022 due to Federal Holiday.**

The board discussed and agreed to move the meeting date to Monday, January 10, 2022 at 5:30pm in recognition of Martin Luther King, Jr. Day.

**Member Pacourek made a motion to change the regular meeting time for the Public Utility Advisory Board to Monday, January 10, 2022, at 3:30 pm. Chairman Szigeti seconded the motion. Motion carried unanimously.**

**6. REPORTS FROM THE BOARD:**

**Chairman Szigeti** – Spoke about the Utility Rates from Farmington, NM, and the tier system they currently have in place.

**Member Pacourek** – Read part of a description from the "Public Utilities Advisory Board" duties/requirements section. He focused on the use of the words "rates" and "fees". He felt the words were being used loosely and would like to see the words be used in their proper format.

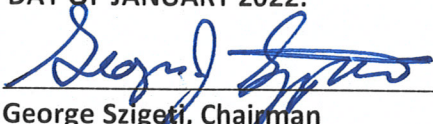
**7. REPORTS FROM STAFF:**

**Traci Alvarez, Assistant City Manager** – Provided an update to Wilson & Company. They have completed the Municipal Water PER for the entire water system. Ms. Alvarez noted, the file is too large to email. Ms. Alvarez will advise Ms. Barclay when the report has been uploaded to the City website, so Ms. Barclay can forward the link to the Public Utility Advisory Board members for their review. Wilson & Company will be providing detailed updates at the second City Commission meeting on January 26, 2022. She encouraged the board to listen to the City Commission meeting and if they had any questions regarding the report given by Wilson & Company, to please call or email her.

**8. ADJOURNMENT:**

There being no further business to come before the Public Utility Advisory Board, Chairman Szigeti made a motion to adjourn the meeting. Member Pacourek seconded the motion. Motion carried unanimously. The meeting was adjourned.

**PASSED AND APPROVED ON THIS 10<sup>th</sup> DAY OF JANUARY 2022.**

  
George Szigeti, Chairman  
Public Utility Advisory Board

Public Utility Advisory Board – meeting December 20, 2021  
Public Comments by Ariel Dougherty

My “friendly suggestion” when PUAB at its last meeting voted again to retable 664 on Renewables was to recommend it go to a workshop. There Advisory Board members, citizens, the City attorney and some renewable experts could work through *in an open discussion* some of the lumps that remain in making this the best possible guide for the City and renewable producers. Many of us – current and potential solar producers and various businesses that install the paneling – are anxious to get an improved, mutually workable Ordinance in place as soon as possible. I would like to propose that the next session include a workshop on 664.

Jim DesJardins, the Ex Dir of the Renewables Energy Industries Association of NM could not attend, but wrote:

*A typical solar system for residential is about 5 kW, although this can vary, depending on lifestyle, etc. Using [PVWatts Calculator \(nrel.gov\)](https://pvwatts.nrel.gov/), that system at zip code 87901 will produce an estimated 8891 kWh per year.*

*In reviewing the documents, it seems that the city does not want to put in a solar rider, but to cap any reimbursement at \$20 per month based on .05 per kWh. I suggest that you advocate for net metering and not pay for what you use, and get credit for what you produce. You want real net metering.*

Absolutely, I have repeatedly said that net metering needs to be better explained in 664 and should not be repeatedly every month “translated into dollars”. That is not net metering.

In the City's Last Comprehensive Plan Infrastructure Goal 6 was to **Promote the use of renewable resources to improve energy efficiency**. It specifically allows residents and businesses “to harness renewable energies” and refers to the excellent triumvirate of solar, wind and thermal that we possess here in TorC. I would like to suggest that a Task Force with two members of PUAB, three citizens, a City representative, and an outside expert be formed to create a blueprint of how to move along these goals. Numerous of our citizens believe that we could become with Solar, Wind and Thermal a model green energy town. A blueprint that designs a plan for going with all these renewables that also addresses the economies for citizens and the City is vital. Fully greening the City would attract visitors.

Happy holiday season all.



## Infrastructure

Infrastructure Implementation Strategy 5.1: Prepare a Drainage Master Plan that includes, but is not limited to, identifying drainage issues, corrective actions, and priorities that would correct the areas of concern related to drainage, with particular attention paid to the Downtown flooding issues. A combination of retention, detention, water harvesting, and percolation methods shall be implemented as the main objective of the Master Drainage Plan.

Infrastructure Implementation Strategy 5.2: Implement a policy to require on site drainage retention for all new developments or when existing sites are improved and to encourage existing areas to implement on-site drainage and water harvesting.

**Infrastructure Goal 6: Promote the use of renewable resources to improve energy efficiency.**

*Objective A: To allow the City to generate its own energy through the development of a solar photovoltaic system and incorporate it into the existing power grid.*

*Objective B: To provide the lowest standardized cost of energy to the community.*

*Objective C: To pursue the placement of utilities underground.*

*Objective D: To allow the residents and businesses to harness renewable energies.*

Infrastructure Implementation Strategy 6.1: Pursue options for the use of renewable energy alternatives, which include solar panels, wind mills, and/or geothermal sources of energy.

Infrastructure Implementation Strategy 6.2: Start construction of the 1.5 megawatt AC solar farm in 2014, as per the agreement with Sierra Electric Cooperative Inc.

Infrastructure Implementation Strategy 6.3: Evaluate the feasibility of requiring new or upgraded utility lines to be buried underground within City limits.

# Electric Quarterly Report

By Ron Fenn

1 of 3

Period July – September 2021

Purchased kWh	Sold kWh	Loss @.1398
15,915,880	12,518,525	3,397,355

Cost \$1,074,915 or \$.06754 /kWh  
106% markup

Rev \$1,750,225 or \$.1398 /kWh

Loss \$474,950.23 21.34%

## Solar Production

126,042 kWh 3.26% of 1,751KW 2208 hr or equivalent of 57.08 KW PV

Represents 1.00% of sold

How well are we operating? At what Cost are we operating?

## Labor Cost?

- Management
- Administrative
- Regular
- Contract

## Equipment?

- Infrastructure
- Consumables

## Vehicles?

- New
- Maintenance

## Facility?

- Utilities
- Maintenance

## Steps to improve performance

Loss Reduction



Row Fenn  
Elec Dept  
2.3



City of Truth or Consequences  
ELECTRIC DEPARTMENT  
505 Sims Street  
Truth or Consequences, New Mexico 87901  
(575) 894-6673

## ELECTRIC QUARTERLY REPORTS

JULY 2021		
SOURCE	TOTAL PURCHASED	COST
SSA Solar of NM 4	320,660 kWh	\$27,993.62
Tri-State- Wheeling Sales	5,6031 kW	\$38,519.86
Western Area Power Administration	5,603 kW & 1,903,309 kWh	\$49,929.37
Sierra Electric Cooperative Inc.	3,403,729 kWh	\$273,812.99
		Total: \$390,255.84

AUGUST 2021		
SOURCE	TOTAL PURCHASED	COST
SSA Solar of NM 4	251,870 kWh	\$21,988.25
Tri-State- Wheeling Sales	5,6031 kW	\$39,401.37
Western Area Power Administration	5,603 kW & 1,901,011 kWh	\$48,903.11
Sierra Electric Cooperative Inc.	3,314,327 kWh	\$266,621.04
		Total: \$376,913.77

SEPTEMBER 2021		
SOURCE	TOTAL PURCHASED	COST
SSA Solar of NM 4	285,250 kWh	\$24,902.33
Tri-State- Wheeling Sales	5,6031 kW	\$38,033.25
Western Area Power Administration	5,603 kW & 1,590,970 kWh	\$45,359.34
Sierra Electric Cooperative Inc.	2,818,712 kWh	\$199,452.62
		Total: \$307,747.54

ACT 15,915,880		Total: \$307,747.54	
JULY 2021 - SEPTEMBER 2021		\$1074915.15 @ .06754 kWh	
TOTAL DELIVERED ACT			
Service Consumption	12,518,525	12,644,567 kW	.1398
Demand Consumption		13,847 @ 8.00	
Revenue		\$1,861,000.95 @ .148659	

ACT COST  
110726  
1,750,225.00

# SOLAR CUSTOMERS ACT	TOTAL CAPACITY ACT
63 Completed 126,042 kWh	1,751 kW PV 4.00
18 Pending Completion	57.08 kW

ACT LOSS 21.34% NOT 19.9% Per Report

~~\$373,498~~

PROJECTS	STATUS
----------	--------

\$474,950

Row Fenn  
3.3



City of Truth or Consequences  
ELECTRIC DEPARTMENT  
505 Sims Street  
Truth or Consequences, New Mexico 87901  
(575) 894-6673

Aerial Med. Voltage Distribution	RFP currently being advertised
Substation Transformer	RFP completed, waiting on funding.
Car Charging Station	On hold
Roundabouts	Waiting for permission from DOT to begin work
White Sands Building	Waiting on transformer
NM State Veteran Center Service Upgrade	Waiting on engineer plans
Sacred Winds	Scheduled to begin soon
Williamsburg Interstate Interchange Plans	Received 60% drawings

Bought

Sold

Loss

744 J 5627698  
744 A 5467208  
720 S 4694932

2208 hr 15789838  
15915880

12644567

ACT 12518525

3,145 271

19.9 %

Solar

CAP

1,751 KW

~~Prod~~ Prod

J 24,213

A 78,429

S 23,400

3,397,355 21.34%

Solar 1.44%

Act.           

3866208 kWh.  
Pot.

126,042

3,866,208

0.0326 x CAP = 57.08

3.26 % of

RATED Solar KW  
CAPACITY



1072

## CACULATIONS REGARDING TRUTH OR CONSEQUENCES (T or C) SOLAR ORDINANCE

Prepared by Jon Biemer, 515 Kopra, 971 803-2850

Revised 12-20-21 1:00 PM

### BENEFIT/COST OF A RESIDENTIAL SOLAR ELECTRIC SYSTEM IN T OR C

**Net Benefit = Reduced power purchases + Reduced demand charge – Lost revenue + Indirect benefits**

Reduced power purchase (for a typical residential solar system) = solar system energy production (kwh) x cost of purchase (\$/kwh)

$$= 8760 \text{ kWh/yr} \times \$0.08045/\text{kwh} = \$704/\text{yr}^{1,2}$$

Reduced demand charge made by external electric suppliers = Capacity of the solar system (kW) x Average peak demand charge of supplying utilities<sup>3</sup>

$$= 5\text{kw} \times \$6.019/\text{kw-mo} \times 12\text{mo/yr} = \$361/\text{yr}^4$$

Lost revenue (for a typical residential solar system) = Solar system energy production X residential electric rate

$$= 8760 \text{ kwh/yr} \times \$0.1314/\text{kwh} = \$1151/\text{yr}^5 \text{ (Ref 1)(Ref 4)}$$

Indirect benefits include: (a) keeping money in the community instead of buying power from elsewhere, (b) jobs for local installers, (c) reducing carbon emissions from fossil generation (75% of power production in New Mexico), and (d) attract and retain residence in T or C, (e) increase T or C energy security (local power reduces dependence on central power plants and transmission lines), and (f) homeowner benefits.

Net Benefit = \$704/yr + \$361/yr - \$1151/yr + Indirect benefits (see above)

$$= <\$86/\text{yr}> + \text{Indirect benefits (see above)}$$

Therefore, a typical 5kW solar electric system has a calculated net cost to T or C of \$86/yr.

---

<sup>1</sup> Based on typical electrical system capacity of 5kW producing 8760 kWh/yr in Phoenix, AZ (Ref 1).

<sup>2</sup> Effective purchase price of electricity from Sierra Electric Cooperative during July and August of 2021. \$273,813 / 3,403,729 kwh = \$0.08045/kwh (July); \$266,621 / 3,314,127 kwh = \$0.08045/kwh (Aug) (Ref 2).

<sup>3</sup> Assume solar peak production drives a T or C demand reduction because peak solar production occurs at a time when air conditioning load would be greatest. However, this would be an aggregated impact of solar electric systems since the demand charge is adjusted annually, not monthly. (REF 6)

<sup>4</sup> Average demand charge of WAPA (\$5.25/kW-mo) and Tri-state Wheeling (\$38,033/5603/kW-mo). (\$5.25/kW-mo + \$38,033/5603kW-mo) / 2 = \$6.019/kW-mo (Ref 3, Ref 2).

<sup>5</sup> Assume that the solar system is designed to replace 100% of the electric load of the residence upon which it resides – “zero net energy.” (Currently Oregon Mountain Solar sizes T or C systems to meet 90% of house electric usage. REF 5).



## THE RESIDENTIAL SOLAR ELECTRIC SYSTEM AS DISTRIBUTED GENERATION USING NET METERING

As a distributed generating resource, the rate of homeowner compensation for solar electric production beyond electric usage could be:

**Homeowner compensation rate = cost electricity that would be purchased elsewhere - or + cost or benefit to T or C.**

$$= \$0.08045/\text{kWh} - (\$86/\text{yr} / 8760 \text{ kwh/yr}) = 0.0706/\text{kWh}^6$$

This is conservative from a fiscal perspective in that the homeowner sells excess power at the wholesale prices, and does not take into account the indirect benefits (see above) of solar electricity.

$$\$0.08045/\text{kWh} - \$0.009817/\text{kWh} = 0.0706/\text{kWh}$$

## CONCLUSIONS

1. The cost/benefit of a solar electric system can be determined by four factors: Reduced power purchases + Reduced demand charge – Lost revenue + Indirect benefits.
2. The net financial impact to T or C of a residential solar electric system sized for zero net energy is less than \$100/yr.
3. Generation beyond a homeowner's needs can be treated as distributed generation and compensated at the rate of avoided cost of purchasing power elsewhere while taking into account the net cost benefit of the system to T or C. Here this compensation is calculated at about 7 cents/kWh.
4. Similar methodology can be used to evaluate and compensate larger (than 5kW) residential and commercial solar electric systems. As long as T or C exceeds the WAPA energy (kWh) allocation and the output of SSA Solar of NM4, limiting the size of solar electric systems is not necessary. Specific infrastructure limitations may affect cost to T or C which can be accounted for.

## REFERENCES

1. "Residential Solar Systems Cost and Savings in Arizona in 2021," *SolarReviews*, updated August 9, 2021, <https://www.solarreviews.com/blog/average-residential-solar-panels-cost-and-savings-arizona>. (Suggests that the energy production of a 5kW solar system in Arizona is 8760 kwh.)
2. "Electric Quarterly Report," City of Truth or Consequences, NM, July-September, 2021 (included in Public Utility Advisory Board minutes, November 15, 2021).
3. "CRSP MC Energy Sales Rates," Western Area Power Administration, updated November 29, 2021, <https://www.wapa.gov/regions/CRSP/rates/Documents/slip-power-sales-rate-history.pdf>.
4. "City of Truth or Consequences – Rate Sheet," Updated September 1, 2021.
5. Telephone conversation with Benjamin of Organ Mountain Solar & Electric.

<sup>6</sup> The flexible resource for purchase of electricity is Sierra Electric Coop. Its de facto rate is \$0.08045/kWh. (Ref 5)