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Board of Trustees
Washtenaw Community College

ACTION

4800 E. Huron River Drive
Ann Arbor, Michigan 48105-4800

Subject
DTE MiGreen Power Contract

Date
May 25, 2021

Background

WCC has been aggressively pursuing a campus wide environmental sustainability plan over the past decade, with the stated intent of achieving a carbon neutral footprint by 2060. In recognition of the worsening environmental conditions, organizations throughout the US and across the world have stepped up their sustainability efforts, with the new goal of carbon neutrality by 2030. In fact, the City of Ann Arbor recently declared a climate emergency and has set a community wide goal to be carbon neutral by 2030.

At the Winter Faculty In-Service session, WCC's Sustainability Committee provided an update on the College's Climate Action and Sustainability Plan. Included in this presentation was an update on the College's sources of greenhouse gas emissions. As seen in the below table, WCC's electric power consumption, as sourced through fossil fuels is the single largest contributor of the Colleges carbon footprint.

Table 1. Percent WCC Greenhouse Gas Emissions by Source - 2018

Source of Greenhouse Gas Emissions	% of Total
Purchased Electricity	37.64%
Student Commuting	29.54%
On-Campus Stationary (natural gas for heating)	21.45%
Staff Commuting	4.22%
Faculty Commuting	2.61%
Electrical Transmission & Distribution Losses	1.77%
Co-generation Steam (natural gas for micro-turbine)	0.77%
Co-gen Electricity (natural gas for micro-turbine)	0.67%
Direct Transportation (on-campus vehicles)	0.63%
Directly Financed Travel - Air	0.52%
Directly Financed Travel - Ground	0.22%
Solid Waste (landfill methane recovery)	-0.03%

TAB G

WCC has developed a two-part plan to eliminate our electric consumption carbon footprint:

- Reduce electric consumption 20% over a ten-year period
- Phase in the power source for WCC's remaining electric consumption from fossil fuels to renewable energy supply over the same 2021 -2030 period

The College has developed a 10-year plan to reduce electric power consumption over the 2021 – 2030 period. Many of these energy conservation efforts will be integrated with planned deferred maintenance projects. A summary of these projects and their estimated energy conservation savings are:

	Annual Electric Usage Conservation (Kwh)	Normal Maintenance Cost	Incremental Energy Conservation Capital Cost	Annual Electric Cost Savings
Light Fixture Replacements	2,658,000	490,000	710,000	243,739
Lighting Control Improvements	77,000	-	50,000	7,061
Building HVAC System Replacements	586,000	10,470,000	245,000	53,736
Building HVAC System Operating Efficiencies	212,500	165,000	50,000	19,486
Buidling Component Replacements	82,500	1,620,000	250,000	7,565
	3,616,000	12,745,000	1,305,000	331,587

WCC explored three options to source it's remaining electric load requirement through renewable energy supply sources:

- Pursue solar array installations on WCC's campus
- Outsource solar array installations to 3rd party investors/operators
- Purchase renewable electric power from our current utility company – DTE

WCC contracted with GEM Energy to study the viability of Solar Car Ports installations above our parking lots

- Using Lot #7 as a prototype, the following was estimated:
  - 1.4 million kw capacity
  - $3.2 million cost to build
  - PPA would cost WCC 15cents/kWh + 2% escalation/year & 25-year contract
- Based upon the Lot #7 assessment, WCC would need 10x the parking lot coverage to support our electric energy requirements and at an estimated cost of $30 – 35 million.
- Using the PPA model, our average purchased power cost would be 15 cents/kWh versus our current utility rate of 10 cents/kWh, or a 5 cent/kWh increase to support on premise renewable power generation
- Based upon the high cost structure of the first two options, WCC then pursued the assessment of DTE's MiGreen Power renewable electric power supply alternative

Summary Contract Provisions:

- DTE's next available renewable energy resources will come online in 2023. These solar power assets will be located in southern Washtenaw and northern Monroe counties.
- WCC would commit to an initial purchase of 25% of its electric power needs from these renewable power assets, commencing in 2023 and then increase an incremental 10% per year through 2029. As a result, by 2030, 100% of WCC's electric power needs will be sourced through renewable power resources.
- The contract price structure is comprised of a contractual surcharge that will not exceed 5.2 cents/kWh. Then each month, this surcharge rate will be offset by the market commodity value of this incremental power supply, which is expected to average a credit of 4.2 cents/kHw. As a result, WCC's incremental cost/kHw for this renewable power source will average 1 cent/kWh

Analysis and Proposal

The average cost of 1 cent/kWh is approximately a 10% premium on our current electric utility rates. However, this 1 cent premium favorably compares to the on-campus solar array PPA costs of 5 cents/kWh or the estimated 3-4 cents for WCC invested on campus solar array facilities.

	Estimated Electric Cost Savings from Conservation	Estimated Incremental MiGreen Power Cost	Conservation Electric Cost Savings NET of MiGreen Power Cost
FY 2021	52,556	-	52,556
FY 2022	118,450	-	118,450
FY 2023	216,900	32,052	184,848
FY 2024	269,266	65,238	204,028
FY 2025	321,503	67,776	253,726
FY 2026	373,036	80,390	292,645
FY 2027	382,926	104,339	278,586
FY 2028	391,850	131,228	260,621
FY 2029	400,547	136,257	264,290
FY 2030	409,107	123,827	285,279
	2,936,139	741,109	2,195,030

WCC's ongoing Deferred Maintenance Plan, coupled with its upcoming ML and SC Renovation projects will provide the necessary funding to achieve this electric energy conservation plan.

Based upon above analysis, the College recommends that we enter into a 10-year MiGreen Power agreement with DTE to source WCC's electric power requirements through renewable power resources. This contract would commence in 2023, with the College purchasing 25% of its power needs through the MiGreen Power agreement. Each year thereafter, the College would increase its renewable power purchases by 10%, with the plan that by 2030, 100% of WCC's electric power requirements will be sourced by renewable power resources. The average incremental cost of 1 cent/kWh will be more than offset by the electric conservations savings achieved over the same 10 year period.

RECOMMENDATION

That the Board of Trustees approve a 10-year contract with DTE Energy to purchase renewable electric power through DTE's MiGreen Power agreement, commencing in 2023 with terms and provisions as outlined to the Board.

A ROLL CALL VOTE WILL BE TAKEN

Prepared by: William Johnson
Title: Executive Vice President of Finance and CFO

Recommended by: Rose B. Bellanca, Ed.D.
Rose B. Bellanca, President
