



# **ADDENDUM**

## **Meeting of the Connect Transit Board of Trustees**

### **MARCH 22, 2016**

**Supporting Documentation for Budget Work Session Presentation.**

**Supporting Documentation for New Business:**

F2. Recommendation for Light Duty LPG Buses RFP 15-18



	COA & Sunday Exp FY 2017		COA & Sunday Exp FY 2017		COA & Sunday Exp FY 2017		Status Quo FY 2017		Status Quo FY 2017	
	Annual Budget	Proposed Budget	Budget \$ Change from FY 2016	Budget % Change from FY 2016	Proposed Budget	Budget \$ Change from FY 2016	Budget % Change from FY 2016	Proposed Budget	Budget \$ Change from FY 2016	Budget % Change from FY 2016
<b>Operating Revenue</b>										
Passenger Fares	847,250.20	883,591.81	36,341.61	4.29%	847,250.20	-	0.00%			
ISU Contract Fares	519,750.00	545,748.00	25,998.00	5.00%	545,748.00	25,998.00	5.00%		25,998.00	5.00%
Other Contract Fares	135,000.00	136,500.00	1,500.00	1.11%	136,500.00	1,500.00	1.11%		1,500.00	1.11%
Advertising Revenue	45,000.00	100,000.00	55,000.00	122.22%	100,000.00	55,000.00	122.22%		55,000.00	122.22%
Miscellaneous Revenue	64,718.50	2,000.00	(62,718.50)	-96.91%	2,000.00	(62,718.50)	-96.91%		(62,718.50)	-96.91%
<b>Total Operating Revenue</b>	<b>1,611,718.70</b>	<b>1,667,839.81</b>	<b>56,121.11</b>	<b>3.48%</b>	<b>1,631,498.20</b>	<b>19,779.50</b>	<b>1.23%</b>		<b>19,779.50</b>	<b>1.23%</b>
<b>Operating Expenses</b>										
Operations Wages	4,746,000.00	5,585,314.00	839,314.00	17.68%	4,780,455.00	34,455.00	0.73%		34,455.00	0.73%
Maintenance Wages	993,350.00	1,137,125.00	143,775.00	14.47%	1,007,090.00	13,740.00	1.38%		13,740.00	1.38%
Administration Wages	1,030,000.00	1,120,600.00	90,600.00	8.80%	1,078,600.00	48,600.00	4.72%		48,600.00	4.72%
Employer Payroll Tax Expense	550,000.00	636,792.48	86,792.48	15.78%	557,260.09	7,260.09	1.32%		7,260.09	1.32%
Retirement Plan	350,000.00	439,851.95	89,851.95	25.67%	411,407.25	61,407.25	17.54%		61,407.25	17.54%
Group Insurance	1,014,000.00	1,544,400.00	530,400.00	52.31%	1,288,000.00	274,000.00	27.02%		274,000.00	27.02%
Uniform Expense	27,700.00	36,600.00	8,900.00	32.13%	30,500.00	2,800.00	10.11%		2,800.00	10.11%
Professional Services	126,650.00	197,950.00	71,300.00	56.30%	196,650.00	70,000.00	55.27%		70,000.00	55.27%
Outside Repair - Labor	109,200.00	118,365.00	9,165.00	8.39%	113,200.00	4,000.00	3.66%		4,000.00	3.66%
Contract Maintenance Services	140,450.00	146,700.00	6,250.00	4.45%	146,700.00	6,250.00	4.45%		6,250.00	4.45%
Custodial Services	11,750.00	15,500.00	3,750.00	31.91%	15,500.00	3,750.00	31.91%		3,750.00	31.91%
Employment Expenses	24,000.00	21,000.00	(3,000.00)	-12.50%	18,000.00	(6,000.00)	-25.00%		(6,000.00)	-25.00%
Fuel	1,279,800.00	1,286,020.00	6,220.00	0.49%	1,234,000.00	(45,800.00)	-3.58%		(45,800.00)	-3.58%
Lubricants	40,950.00	44,252.00	3,302.00	8.06%	42,550.00	1,600.00	3.91%		1,600.00	3.91%
Tires	88,000.00	96,240.00	8,240.00	9.36%	92,000.00	4,000.00	4.55%		4,000.00	4.55%
Bus Repair Parts	166,450.00	187,900.00	21,450.00	12.89%	180,000.00	13,550.00	8.14%		13,550.00	8.14%
Other Materials and Supplies	59,000.00	56,000.00	(3,000.00)	-5.08%	56,000.00	(3,000.00)	-5.08%		(3,000.00)	-5.08%
Shelters/Signs/Shop Tools	8,000.00	7,200.00	(800.00)	-10.00%	7,200.00	(800.00)	-10.00%		(800.00)	-10.00%
Computer and Office Supplies	115,000.00	144,500.00	29,500.00	25.65%	144,500.00	29,500.00	25.65%		29,500.00	25.65%
Utilities	127,000.00	133,600.00	6,600.00	5.20%	133,600.00	6,600.00	5.20%		6,600.00	5.20%
Corporate Insurance	259,000.00	277,000.00	18,000.00	6.95%	277,000.00	18,000.00	6.95%		18,000.00	6.95%
Dues/Subscriptions/Fees	37,700.00	45,200.00	7,500.00	19.89%	45,200.00	7,500.00	19.89%		7,500.00	19.89%
Printing/Marketing/Training	247,000.00	281,500.00	34,500.00	13.97%	271,500.00	24,500.00	9.92%		24,500.00	9.92%
<b>Total Operating Expenses</b>	<b>11,551,000.00</b>	<b>13,559,610.43</b>	<b>2,008,610.43</b>	<b>17.39%</b>	<b>12,126,912.34</b>	<b>575,912.34</b>	<b>4.99%</b>		<b>575,912.34</b>	<b>4.99%</b>
<b>Operating Revenue</b>	<b>1,611,718.70</b>	<b>1,667,839.81</b>	<b>56,121.11</b>	<b>3.48%</b>	<b>1,631,498.20</b>	<b>19,779.50</b>	<b>1.23%</b>		<b>19,779.50</b>	<b>1.23%</b>
Local Revenue	-	1,000,000.00	1,000,000.00		-	-			-	
State Support	7,508,150.00	8,813,746.78	1,305,596.78	17.39%	7,882,493.02	374,343.02	4.99%		374,343.02	4.99%
Federal Support	2,431,131.30	2,078,023.85	(353,107.45)	-14.52%	2,612,921.12	181,789.82	7.48%		181,789.82	7.48%
<b>Total Revenue and Support</b>	<b>11,551,000.00</b>	<b>13,559,610.43</b>	<b>2,008,610.43</b>	<b>17.39%</b>	<b>12,126,912.34</b>	<b>575,912.34</b>	<b>4.99%</b>		<b>575,912.34</b>	<b>4.99%</b>



#### Assumptions - Status Quo

We assumed the same number and frequency of routes for FY 2017 as we had for FY 2016.

We assumed no income from the Oakland Avenue Lease in FY 2017

We assumed no income from Lincoln College in FY 2017

We assumed a no price increase in cash and pass fares. We assumed a 5% increase in revenue from ISU and Heartland.

We assumed a 30% increase in Employee Health Insurance.

All represented employees received a 2% increase, per the CBA.

The average increase for the non-represented employees is 2.4%.

#### Assumptions - COA and Sunday

We assumed we would change the routes and frequencies to coincide with the COA. We also assumed we would add Sunday service.

We assumed a 6% increase in cash, and no increase in pass fares. We assumed a 5% increase from ISU and Heartland.

We assumed the following increases in expenses compared to the status quo budget:

15% increase in Driver Wages - adding 18 drivers and 27,500 revenue hours

33% increase in Operation Supervisors' Wages - adding 2 Operation Supervisors and 2 Dispatchers

13% increase in Maintenance Wages - adding 2 Mechanics, 1 Custodian.

11% increase in Payroll Taxes and Retirement Plan expenses based on increase in employees

20% increase in Group Insurance based on the increase in employees

20% increase in Uniform Expense based on the increase in employees

4% increase in Outside Services, Diesel, Lubricants, Tires, and Bus Parts for Fixed Route based on increase in mileage.

7.5% increase in Outside Services, Gas, Lubricants, Tires, and Bus Parts for Demand Response based on increase in mileage.



**GOALS**

- Less cash handling for employees and customers
- Easy but flexible options for employees and customers
- Cost effective for Connect Transit

**TIMELINE**

**May 2016**

- New fare boxes installed

**May to August 2016**

- Continue with current structure
- Discontinue tokens
- Begin to replace monthly Fast Passes with re-loadable magnetic stripe cards

**August 2016 (In conjunction with COA)**

- New structure begins
- Fare will be paid by cash or a pass as outlined

	<b>Fixed Route</b>	<b>Demand Response</b>
<b>One Way Fare</b>	\$1	\$2
<b>One Day Pass</b>	\$3	Ride Card
<b>7 Day Pass</b>	\$12	Ride Card
<b>30 Day Pass</b>	\$40 (38% increase)	Ride Card

- Riders will be able to purchase their magnetic stripe passes at Connect Transit offices or vendor locations
- All passes will be given on a magnetic stripe card that can be re-loaded month to month
- Magnetic stripe cards can be printed on buses in the instance that a rider needs change for their fare - all change will be paid in the form of a card/pass

**November 2016**

- Launch mobile ticketing
- Consider single trip fare increase



March 18, 2016

Board of Trustees

Subject: Total Cost of Ownership for Propane Buses

Connect Transit will be acquiring propane light-duty buses to replace diesel buses over the next five years. Staff has compared the total cost of ownership between a diesel and propane light duty bus over the five (5) year service life.

**Total Cost of Ownership**

	Diesel	Propane
<b>Fuel Consumption</b>		
Annual Miles	35,000.00	35,000.00
Years in Service	5	5
Total Miles over Service Life	175,000.00	175,000.00
Average MPG	9.40	7.99
Gallons Consumed Annually	3,723.40	4,380.48
Gallons Consumed Total	18,617.02	21,902.38
Diesel Price Per Gallon	\$2.98	
Propane Price per Gallon		\$1.38
<b>Maintenance Comparison</b>		
Oil Interval	6,000.00	6,000.00
Oil Capacity	17.00	7.00
Oil Filter Cost	\$25.00	\$5.00
Oil Cost per Quart	\$1.50	\$1.50
DEF Gallons (2%)	372.34	0.00
DEF Cost per Gallon	\$2.50	\$0.00
PM's Over Life	29	29
Labor Hours per PM	1	1
Hourly Labor Cost	\$30.00	\$30.00
Fuel Filter Change Interval	12,000	50,000
Fuel Filter Cost	\$28.00	\$100.00
Total Filter Changes	15	4
Annual Electric Bill for Engine Heating	\$0	0
Total Electric for Engine Heating	\$0	0



Operating Costs		
Lifetime Fuel Cost	\$55,478.72	\$30,225.28
Lifetime PM Cost	\$3,687.10	\$1,677.08
<b>TOTAL Cost to Operate</b>	<b>\$59,165.82</b>	<b>\$31,902.36</b>
Absolute Savings		
Annual Cost to Operate	\$11,833.16	\$6,380.47
Annual Savings vs. Diesel	\$0.00	\$5,452.69
Estimated Operating Cost Per Mile	\$0.33	\$0.18
<b>Minimum Operational Savings</b>	<b>\$27,263.46</b>	

	Diesel	Propane Autogas
<b>Asset Cost Estimate</b>	\$140,000.00	\$153,000.00
<b>Cost to Operate</b>	\$59,165.82	\$31,902.36
<b>Total Cost of Ownership</b>	\$199,165.82	\$184,902.36
<b>Years to Breakeven</b>	<b>2.38</b>	
<b>TCO Savings with Propane</b>	<b>\$14,263.46</b>	

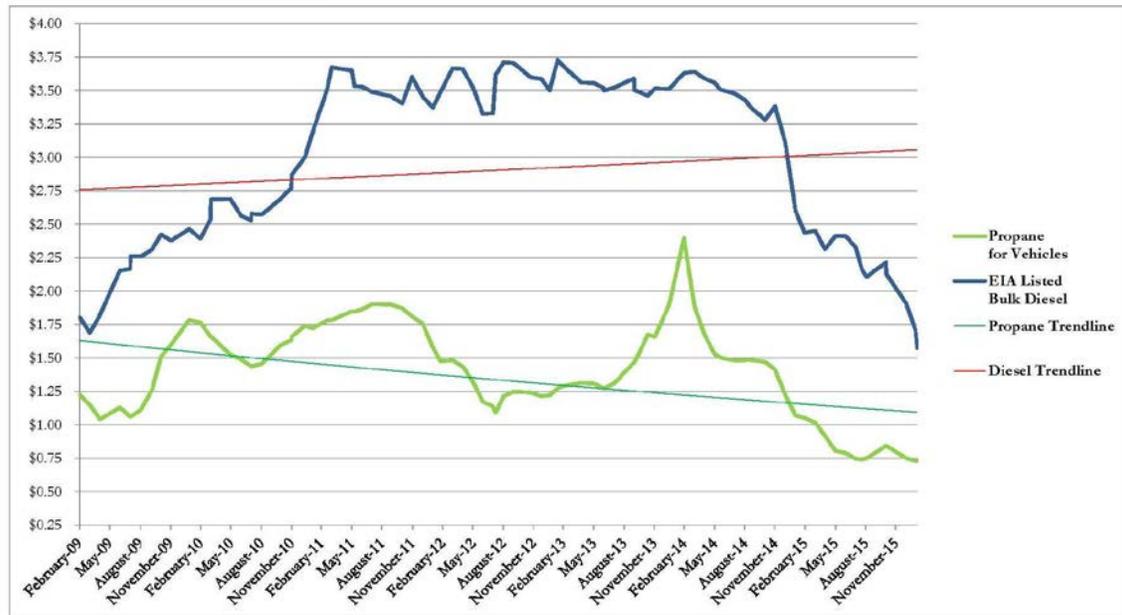
Connect will break-even on the purchase of propane vehicles in 2.38 years and save \$14,263 by purchasing propane vehicles instead of diesel vehicles.

### Diesel and Propane Pricing

The Figure 1 below demonstrates the average price per gallon of diesel and propane since 2009. The average diesel per gallon is \$2.98 and the average gallon of propane is \$1.38.



**Figure 1 Price Per Gallon of Diesel and Propane**

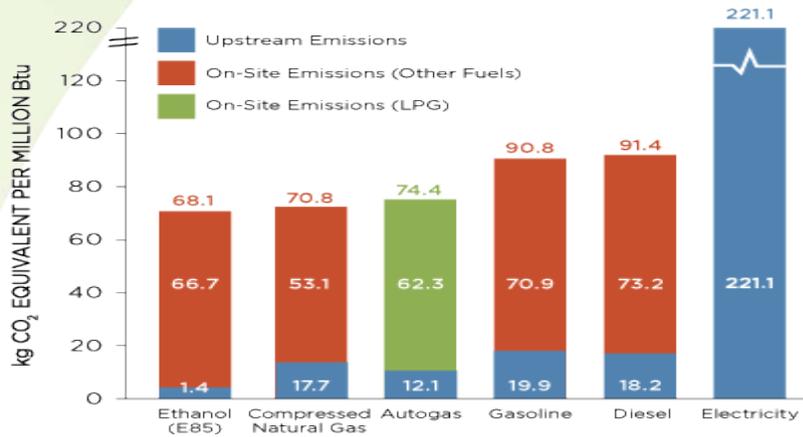


**Environmental Impact**

This total cost of ownership does not reflect the environmental impact of using propane. Figure 2 shows the relative carbon dioxide emissions rates for various fuels. With the exception of natural gas, propane autogas has the lowest emissions rate of the major energy sources.

**Figure 2**

**TOTAL CARBON EMISSIONS FOR VARIOUS FUELS**



Note: Based on this chart, credit is given to ethanol for carbon sequestration during crop production.

**Propane Rebate**

The average price of propane does not include the \$.50 rebate for each gallon of propane Connect can receive through the State of Illinois.