



Know when to hold-em!
Know when to fold-em!
Know where to set stops!
Know when to run!
Never count your portfolio
Until the sells are done..

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Monthly subscription US\$19.99

As most Western Governments are on a path of energy transition, technology that saves or reduces energy consumption are just as important. I don't agree with how governments here in North America are proceeding with the transition as they are putting that first ahead of energy security. I am afraid their policies will cause an energy shortage, but in that case, companies that can help save energy will be even more attractive.

After adjusting for inflation, [costs for major U.S. utilities to produce electricity rose 6% in 2021](#) as a result of rising fuel costs. For a number of years, electricity production costs had declined as natural gas prices fell and new low-cost renewable generators came online. The cost to deliver electricity across transmission and distribution lines increased 12% in 2020 and remained steady in 2021. The latest data I found, [according to choseenergy.com](#), electricity prices were up 11.2% in the US from November 2021 to November 2022.

Many people do not realize but electricity demand is around twice as high during the day (work hours) compared to at night, so natural gas power plants are used as the swing producer because they are the easiest to turn on and off. The summer demand has been increasing. The average monthly capacity factor for simple-cycle, natural gas turbine (SCGT) power plants in the United States has grown annually since 2020. Average capacity factors surpassed 20% for two consecutive summer months in 2022—the first time on record—to meet peak electricity demand, based on data from our [Electric Power Monthly](#).

U.S. simple-cycle natural gas turbines operated at record highs in summer 2022

Monthly U.S. simple-cycle natural gas turbine capacity factor (Jan 2017–Dec 2022)
percentage



Data source: U.S. Energy Information Administration, [Electric Power Monthly](#)

With rising electricity demand going green and charging EVs, along with higher electricity prices, companies that have technology to save electricity will be in big demand. I have mentioned many times about junior tech companies that having the best technology is great but you need great sales people too or some kind of sales advantage or angle. For example, my last tech pick, Clip Money already have the customer base form their last endeavour into ATMs. I believe Airtest has great technology to save on electricity costs, but they were lacking on the sales side until now.

Airtest **TSXV:ATT** **OTC:ATTGF** **Recent Price \$0.025**
Entry Price - \$0.07 **Opinion – average down to \$0.04**

Lorne Stewart took over control as President of Airtest at the start of the year. He has been employed for the last four years as sales representative and more recently sales manager for Camfil Canada. Camfill is a 60 year old air filtration company so a very similar industry as Airtest being basically air quality and measurement. He has continually exceeded sales targets, growing his sales territory by 400 per cent during the last four years. This has given him an opportunity to understand the industry and the potential that exists for Airtest. I believe that this addition to the Airtest team is a significant step towards strategic growth.

Mr. Stewart commented: "*Airtest has generated business over the last 20 years with over 1,600 customers. This existing base of customers represents a database that can be introduced to the company's latest offerings with tremendous potential. In addition to this existing database of clients, a large number of prospective customers are also reaching out to the company driven by our quality, value proposition and industry expertise. I'm looking forward to leading Airtest to significant sales growth and profitability.*"

Proven Technology with big savings

- Airtest CO₂ transmitters installed in 600 Lowes stores. Installation was 100% funded by rebates from energy and payback was less than 2 years:
- 1,140 Shoppers Drug Mart stores retrofitted resulted in a 18% total energy reduction with payback less than 2 years:
- Installed in 65 Canadian Tire stores in Ontario Canada. Delivered over \$240,000 in natural gas savings alone and payback less than 2 years:
- Installed in 12 new IKEA stores with a greater than 50% reduction in ventilation costs and payback less than 2 years.



TR9277-EO
CO₂, Temperature &
RH Transmitter
Powered by Ambient
Indoor Light

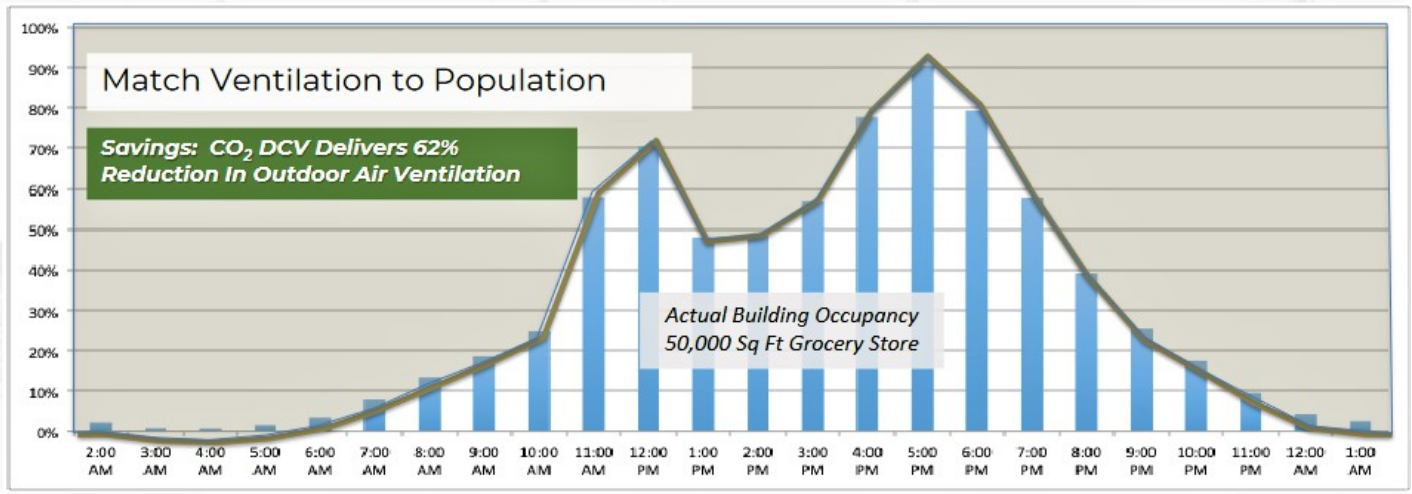
irTest
Powered by Echoflex

Key Product Features

irTest
Harvesting Energy Savings in Buildings

- Zero Energy™ Transmitter that harvests power from ambient light.
- Self-calibrating CO₂ feature eliminates maintenance.
- Built-in pressure sensor corrects CO₂ reading for altitude.
- Optional battery can be installed to provide extended backup in low light conditions. Five-year operation on battery alone.
- Smart power management logic manages sampling and message transmission based on real time ambient light levels.

Basically by measuring CO2 levels, ventilation can be provided as needed. You don't need much ventilation at night if a store is empty and closed. This saves on the amount of air you have to heat or cool. This data from a grocery store shows a good graphic picture.



Building codes require fresh air ventilation in all public buildings based on maximum possible occupancy. There has not been much in the way of controlling these units, they just run at maximum. Previously it has been too expensive to hard wire in CO2 sensors, but Airstest breaks this cost barrier with wireless sensors.

The market is huge with around 20 million Roof Top Units for heating and cooling with about 80% of them not measuring CO2. Companies need to reduce operating costs and carbon emissions. Airstest's next target market is grocery stores and retail store chains.



Initial Target Market



North American Grocery Stores

160,000 + Stores

Current penetration of DCV ~20%

Available market @ \$25k/store = \$3.2B



North American Retail Store Chains

Non-grocery retail store chains = 250,000+

Current penetration of DCV ~20%

Available market @ \$15k/store = \$3.75B +

In the 1st 3 quarters of 2022, sales were just over \$1.8 million and you can see from above, the potential is in the \$billions. It should not be too difficult to get into the 10s of \$millions run rate.

On March 1st Airstest announced that their IAQEye demand control ventilation (DCV) solution has been approved by Save On Energy for a 50-per-cent subsidy. The DCV solution is intended to be installed at numerous shopping malls in Ontario. This will bring the cost break even point down to about 1 year. Airstest has also submitted their technology to Alternative Energy Systems Consulting (AESC) to evaluate with the goal to garner incentives or rebates in California.

On March 7th Airtest received a blanket order from Prism Systems for 2,000 humidity and temperature sensors for delivery over four months.

On March 22 Airtest signed a comprehensive agency agreement with Star Energy Solutions Inc. Star brings energy saving solutions to it's clients and recent installations of various efficiency technologies in over 500 locations saw total estimated annual savings of over \$20-million with less than a four-year payback.

It seems the stars just recently aligned for Airtest.

- Rising electricity demand in the push to green and electrification:
- Rising electricity prices with that strong demand:
- ESG means companies need to reduce costs and carbon emissions:
- Airtest beginning to qualify for 50% subsidies:
- New leadership with stronger sales background:
- Recent sales momentum:
- And for investors, a low entry level stock price.

This is just a small company with 223 million shares out and 3 cents has a valuation of just \$6.7 million. It is a stock you can throw a few \$1,000 at. On the chart, it looks like a bottom is in and is breaking out above the down trend channel. A close above the 200 day MA would be confirmation. I see resistance levels around 6 and 12 cents.



Very view realize the high cost and the amount of electricity needed to charge EVs. I saw articles that point out it is **more expensive to charge these than comparable gas powered cars, so I did my own analysis and it is true.** I used the EPA ratings on these cars. Plus you will pay a higher price for the Tesla and I did not include the cost of a Level 2 charger, so the charging cost is at charging stations. I used \$3 per gallon gasoline as that is about the current going rate where I am in Florida.

	Summer	Winter
Tesla Model 3	11.2 cents/mile	15.8 cents/mile
BMW 3 Series (gas)	10.4 cents/mile	10.4 cents/mile
Jaguar XE (gas)	10.4 cents/mile	10.4 cents/mile

Cheap charging EVs at home is a myth but is the cheapest option if practical. Meaning if you only drive once or twice a week and/or short distances. However it would take several days to charge your EV so realistically you have to install a Level 2 charger in your garage. The cost isn't cheap. About US\$2,000 for parts and installation is a reasonable ballpark figure. Moving up to Level 2 means you'll cut your charging time considerably. Many new electric cars can take [up to 12 hours](#) to charge using a Level 2 outlet, because they have bigger battery packs.

The average price to charge a 60-kilowatt-hour Tesla Model 3 at home is US\$6.83, while [it's \\$8.88 for Volvo XC40 Recharge with a 78-kWh battery pack](#) and \$14.92 for a [Ford F-150 Lightning with its larger 131 kWh battery](#).

[The big catch is that's based on an average per-kWh cost of just over US\\$0.11.](#) A huge issue is most utility companies charge for delivery, transmission, line loss, regulatory fee, debt reduction and taxes etc. In Ontario where I live you pay about 8.2 cents during off peak at night and 17 cents during peak. So pick an average of 12 cents, but the additional charges add another 8 cents or so, and we are up at 20 cents plus 13% tax and we are up to Cdn22.6 cents/k-Wh. California is popular for EVs and the [EIA reports electricity prices](#) of 24.46 cents/k-WH there.

[High-speed charging at Electrify America](#), meanwhile, costs something on the order of US\$0.41 per kWh. Some Tesla Superchargers are charging as much as US\$0.50 per kWh. That would mean your \$6.83 at-home Tesla Model 3 charge would instead cost US\$30, while that \$14.92 Lightning fill-up jumps to \$53.71.

Unlike a typical 240-volt Level 2 home charger system, you will find Level 3 chargers in commercial settings because they're prohibitively expensive for a private individual to get installed at home. Depending on an electric vehicle's charging source and battery capacity, some drivers can charge their cars to 80% in as little as 15 to 30 minutes using a Level 3 fast charger.

The devil is in the details

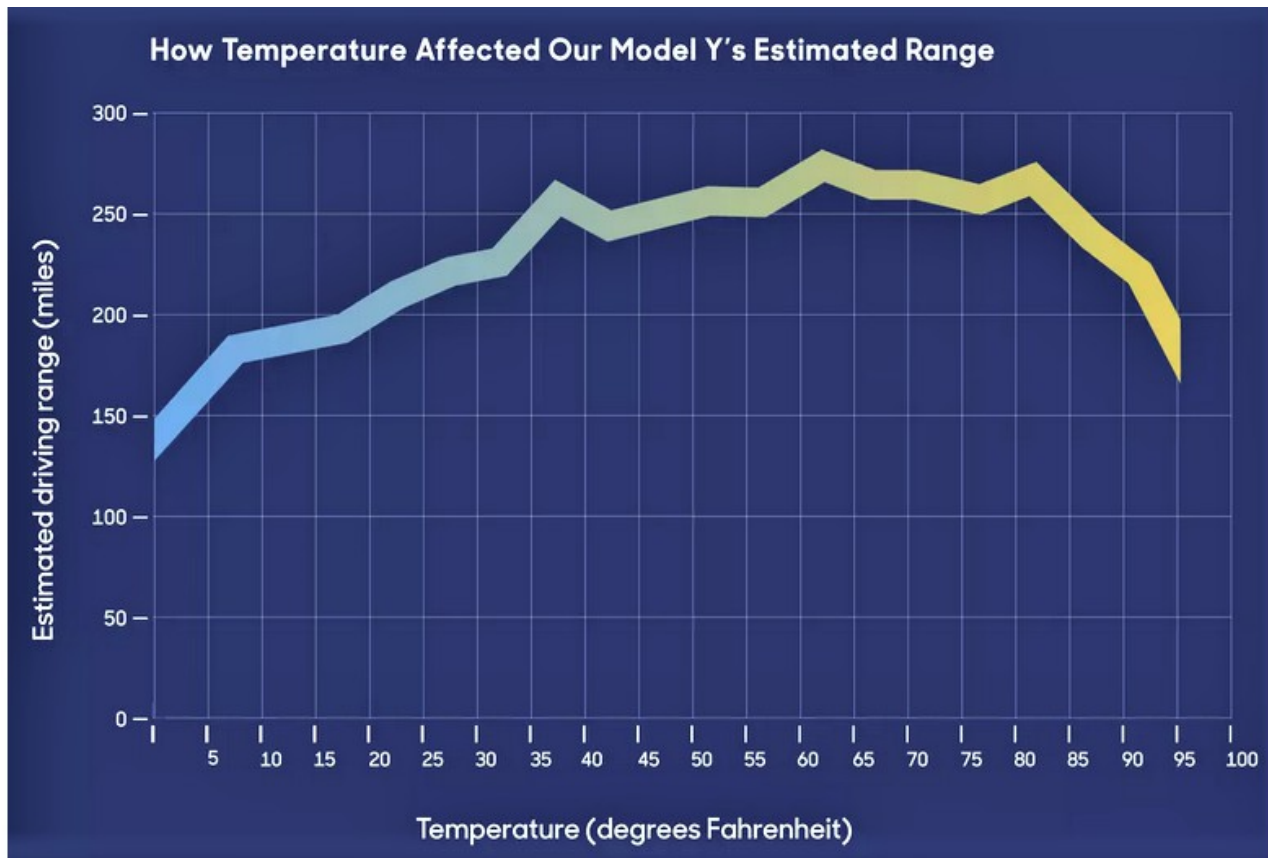
If you're going to be a heavy user of 240-volt public charging stations, pay attention to the speed of the onboard charger for any EV you're considering. How much you'll pay at a public charging station depends on it. This is because charge stations often make you pay by the hour. So a car with a slow onboard charger will cost more to fill than one with a fast one. The differences can be huge: A base 2017 Nissan Leaf with the then-standard 3.3-kW onboard charger takes twice as long to charge, and twice as much electricity to fill, than a 2018 or later Nissan Leaf with the 6.6-kW onboard charger. Thankfully, many EVs now come standard with a 6.6-kW or a 7.2-kW charger.

The Tesla model 3 is rated for 267 miles of range on a single charge. Of that, 175 miles can be restored in 15 minutes by plugging into the company's Supercharger network. Based on the \$30 cost at a supercharger for a full charge and 267 mile range, that is 11.2 cents per mile. Remember you will not get the full range because in reality you are not going to run your battery down to zero. Charging stations are not as plentiful as gas stations. However to compare fairly I assume using a full charge to full tank of gas.



These EVs are really not practical in Canada and northern US states for about 1/2 the year. It is called winter. Battery performance degrades in cold weather and your batteries also have to power the cabin heater and windshield defroster. An AAA study found range can be reduced by 41% on average when the temperature drops from 75 degrees Fahrenheit to 20 degrees and the climate control system is used to heat the cabin.

[Car.com did a road test with a Tesla model Y](#) and the range dropped over 50% at 0 to 5 degrees Fahrenheit. I also note a drop in hot weather which they did not comment on so I assume it is air conditioning.



The BMW 3 Series has been one of the best go-to small, luxury sport sedans for over 40 years.

With a starting price of around \$44,000, the BMW 3 Series is not only cheaper than most of its gasoline competition, it's cheaper than the Tesla Model 3 (\$55,000) too, not counting tax incentives. EPA rates it at 29 mpg with 15.6 gallon tank. So a 452 mile range and gas at \$3/gallon would be $\$46.80 = 10.4$ cents per mile.



[The 2020 Jaguar XE](#) (\$30,500) borrows its looks from the more expensive side of its brand's lineup. Because that brand is Jaguar, the XE looks very, very good. What's also impressive with the XE is that its all-wheel-drive system is able to send a 10:90 split to the front:rear wheels, the other way around with a 90:10 split front:rear, and 50:50 for optimal traction when you're really stuck. EPA rates it at 29 mpg (25 city, 34 Hwy) and has a 16.6 gallon fuel tank. So a 481 mile range and gas at \$3/gallon would be \$49.80 = 10.4 cents cents per mile.



I did not analyze other cars and there is many similar and many with much better gas mileage. On average Americans drive around 14,000 miles per year. That BMW 3 Series would cost the average driver \$1,456 per year at \$3.00 gas, so less than your \$2,000 Level 2 charger. In essence you drive for free in your first year with your fossil fuel burner. Also keep in mind your EV is really a 50% coal burner because almost 50% of electrical generation in the US is from coal.

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