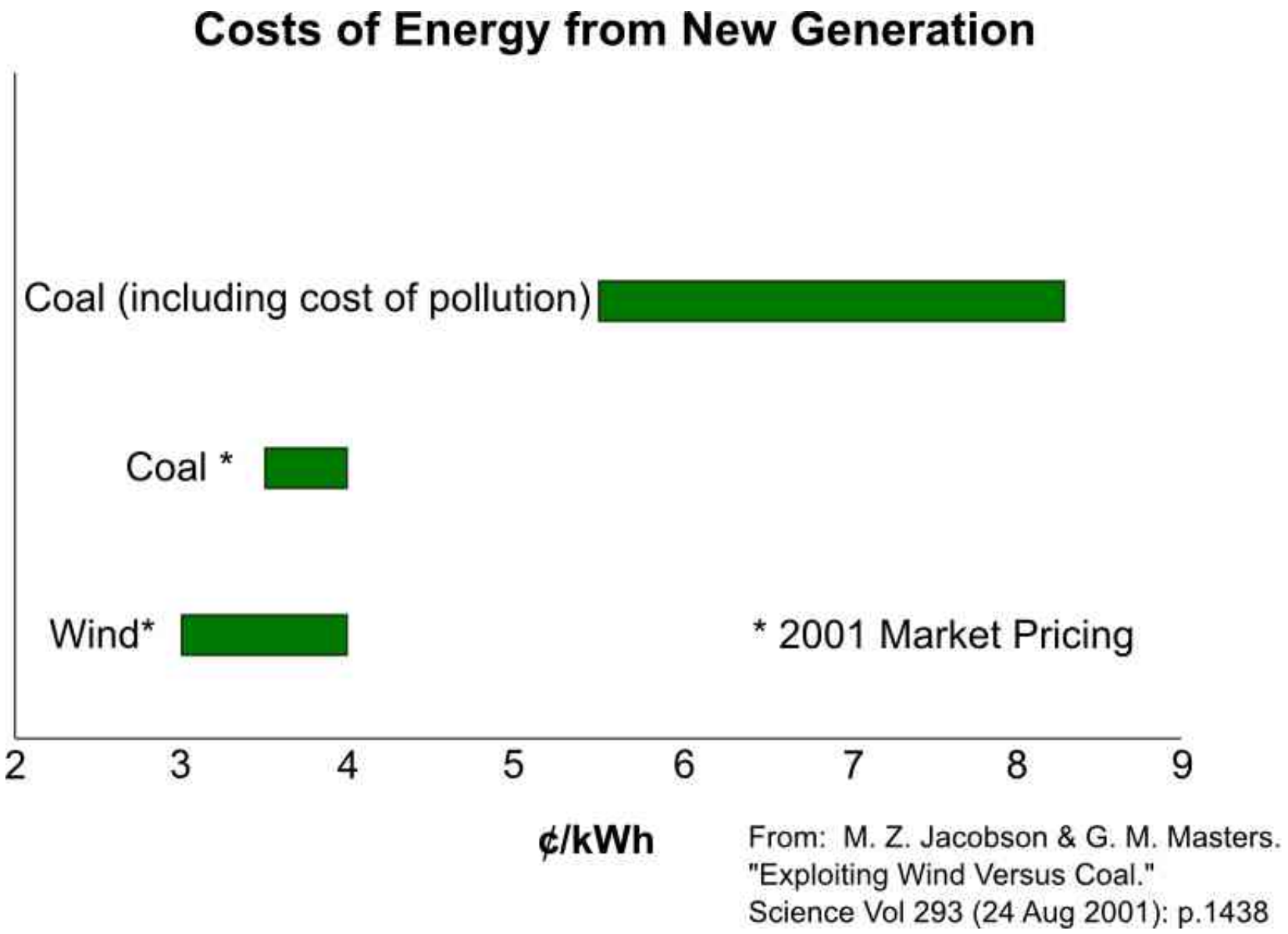
VELKESS

Kinetic Energy Storage Systems

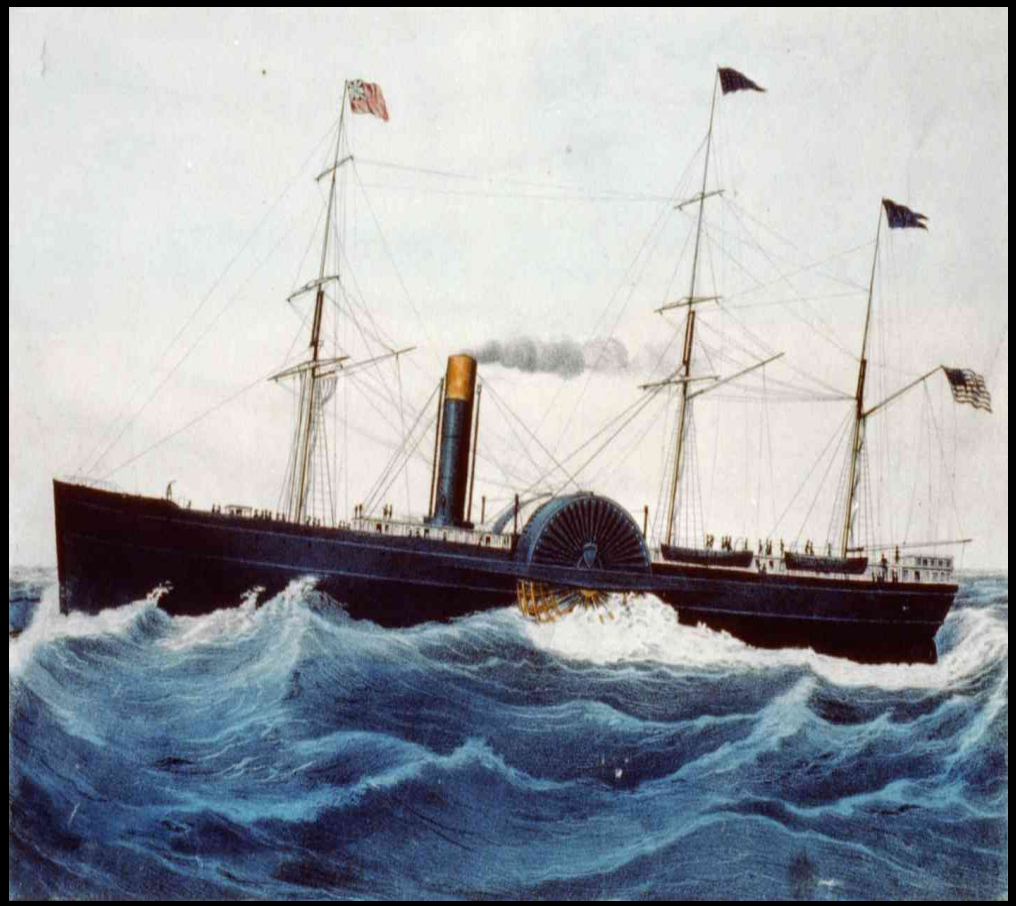
Revs – Cost = Profit

Wind *IS* Cheaper than Coal!



From: M. Z. Jacobson & G. M. Masters.
"Exploiting Wind Versus Coal."
Science Vol 293 (24 Aug 2001): p.1438

Revs – Cost = Profit

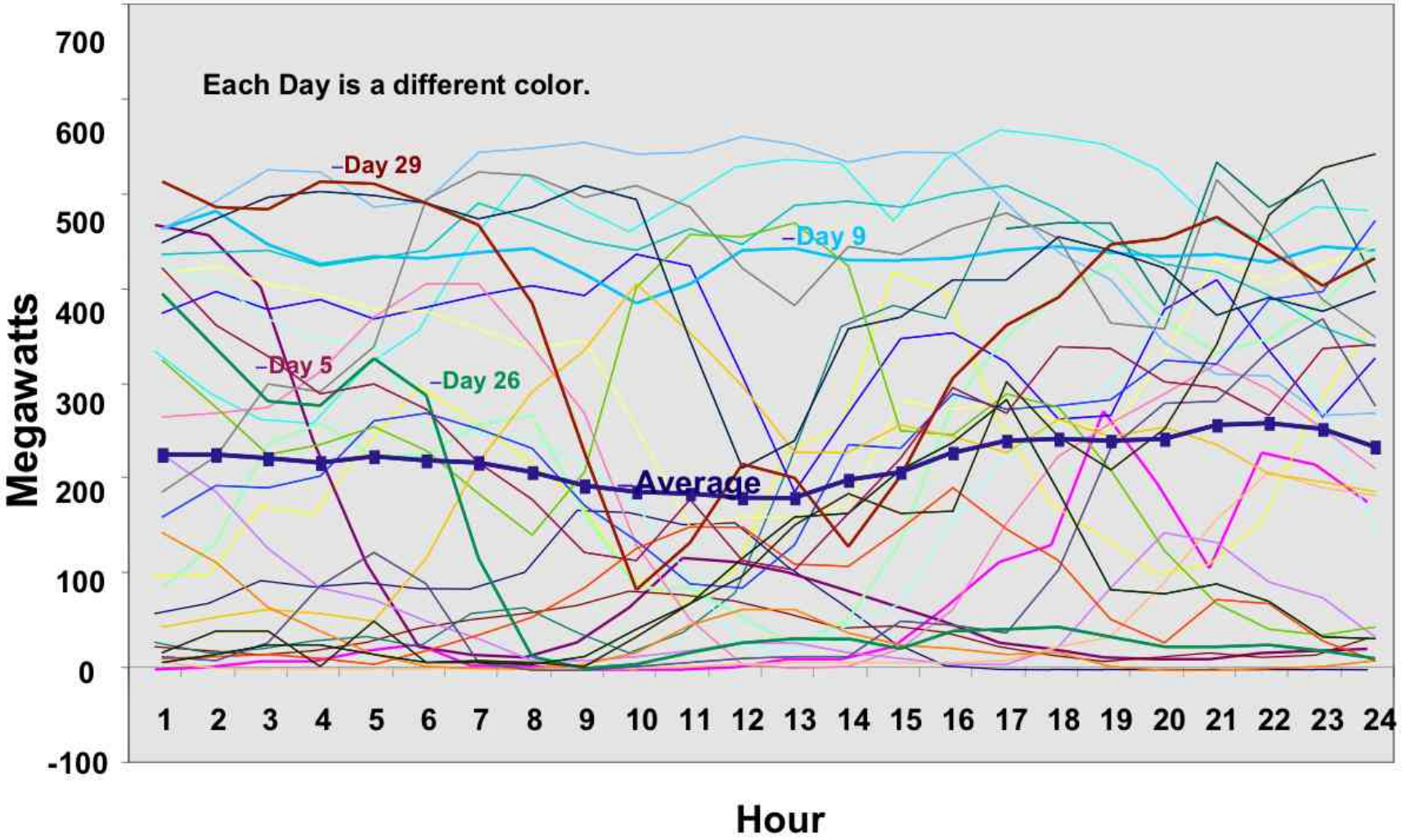


Time = Money

You Get Wind Energy When the Wind Blows!

- Cannot Increase or Decrease Production to Meet Demand.
- Very Difficult to Predict Day Ahead or Even Hour Ahead.

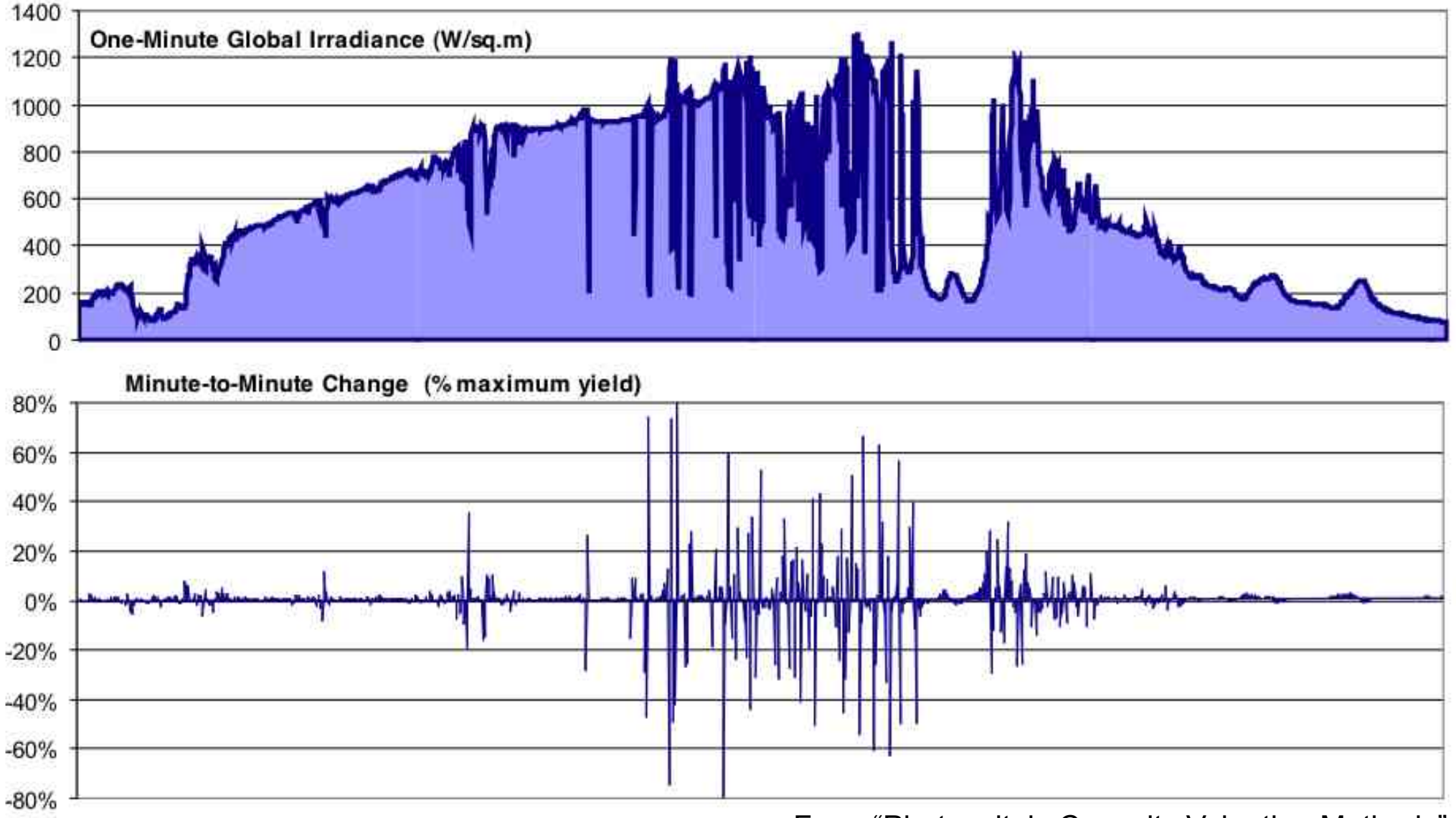
Tehachapi Wind Farm Output - April 2005



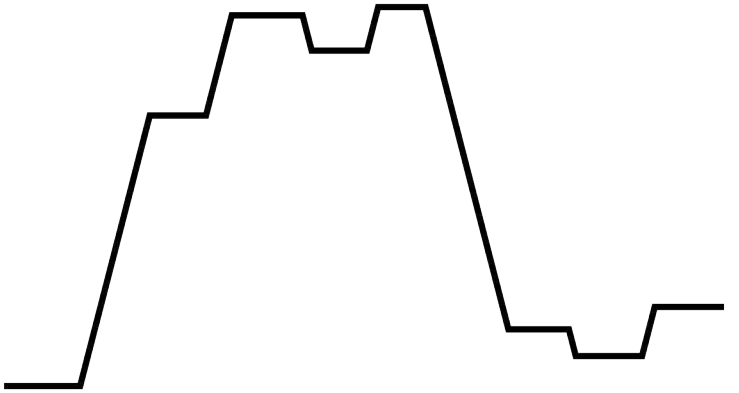
From "Briefing in the CAISO Renewables Integration Study", October 17 2007

... And You Get Solar Energy When the Sun Shines!

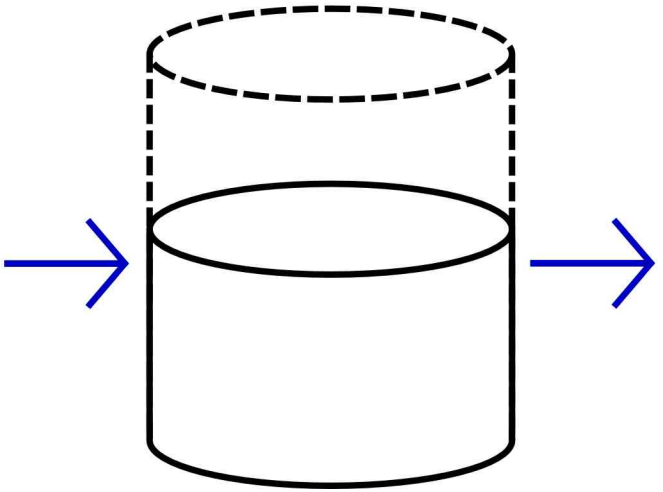
Actual Minute to Minute Output of a Single Solar Array

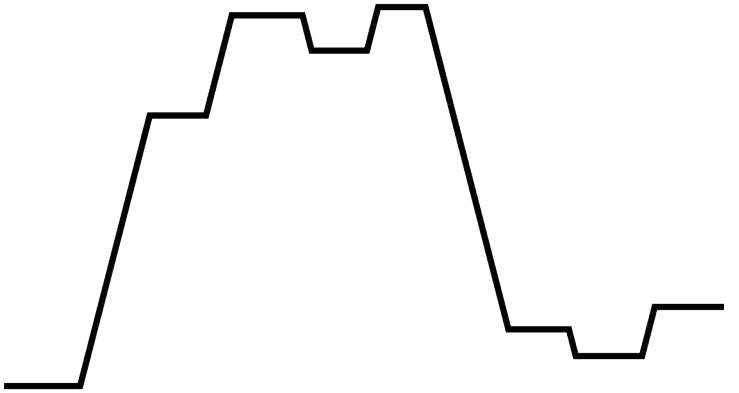


From “Photovoltaic Capacity Valuation Methods”, Solar Electric Power Association May 2008



Storage



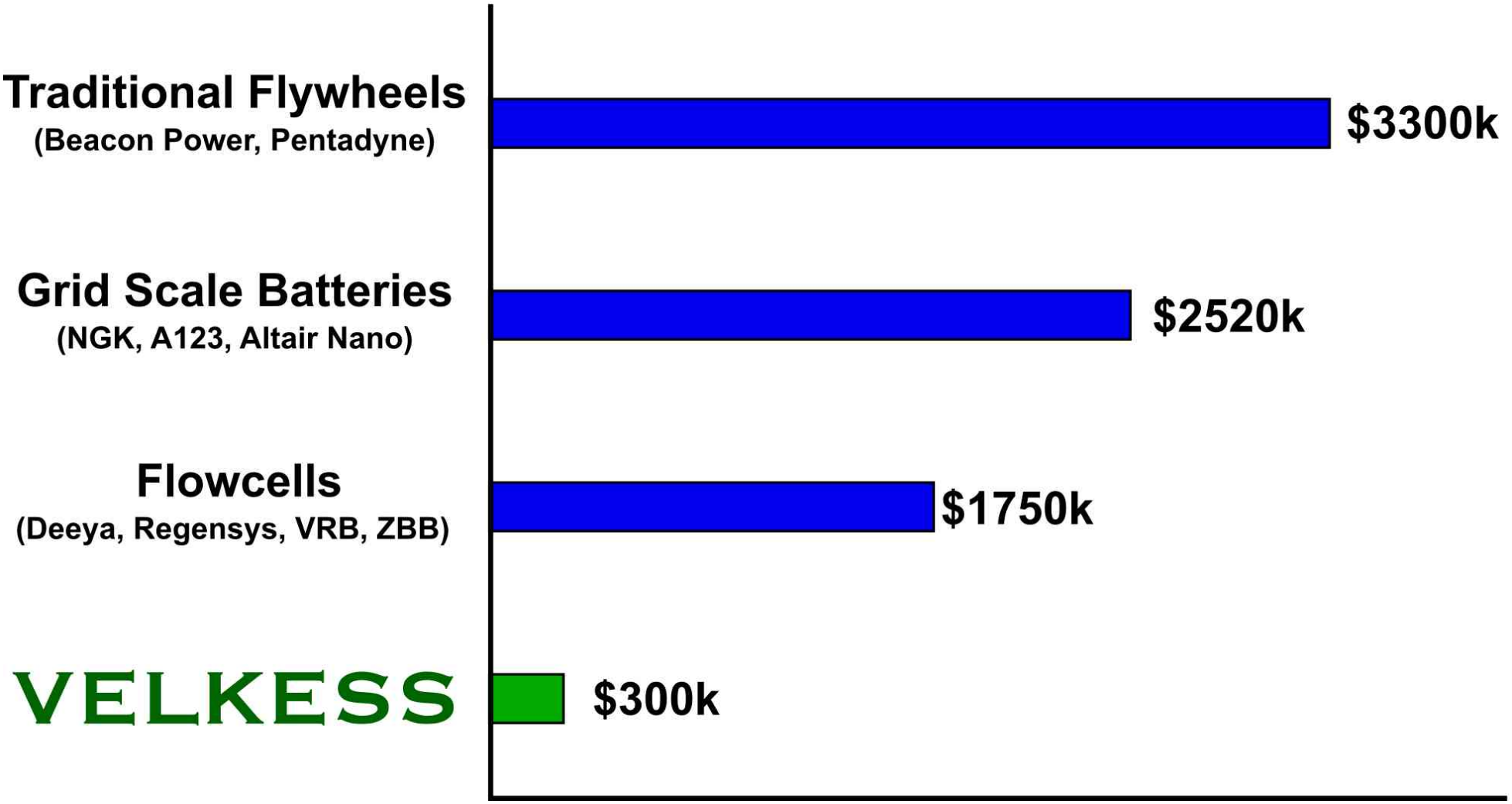


Revs – Cost = Profit

Energy Storage Solution Comparisons

(uses most aggressive available ***projections*** for competitive technologies)

1MW Regulation System

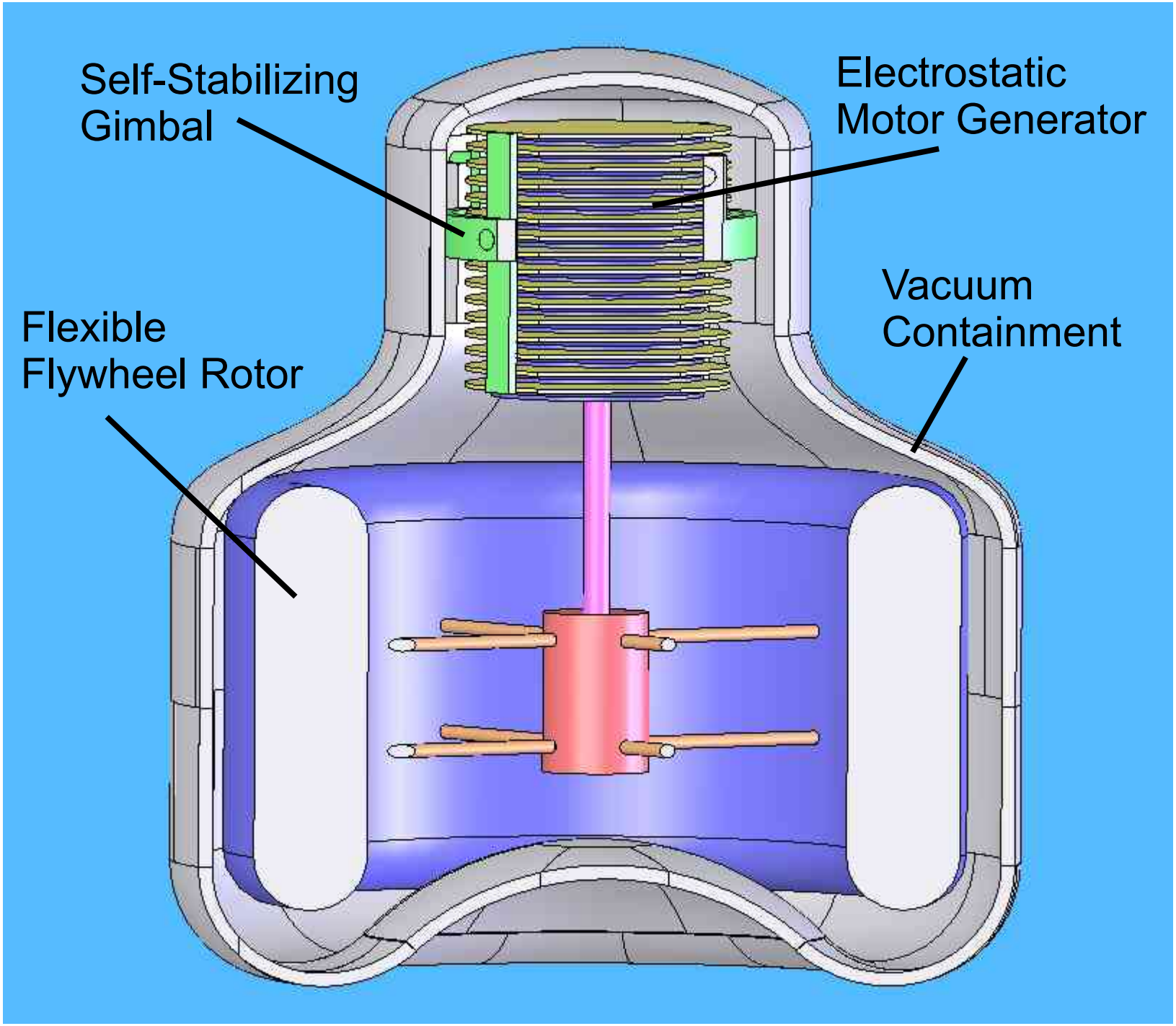


Velkess has demonstrated technology on a bench scale that is capable of storing **industrial** quantities of electrical energy and providing stored power at approximately 1/10th the cost and 2x the efficiency of any currently available technology in the market today.

Velkess's current prototype has not yet been optimized for efficiency. Never-the-less it is functioning with
85% DC to DC efficiency.

Velkess is seeking to fund development of a full scale manufacturable prototype system, initiate commercial production, and install initial systems.

Velkess Flywheel Energy Storage System



Velkess's Core Technologies Enable Radically Lower Cost While Preserving Excellent Efficiency and Performance

Self Stabilizing Flexible Flywheel Rotor System

- Dramatic Cost Reduction of Storage Medium
- Inherent Stability = Safety
- Easy to Manufacture

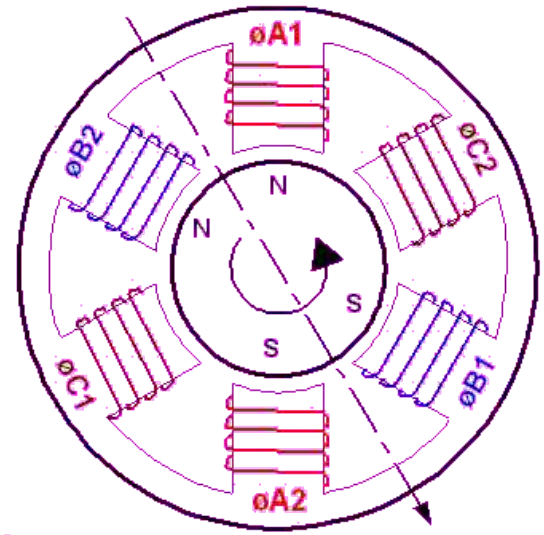
Floating Rotor Electrostatic Motor Generator

- Extremely High Efficiency
- Very Low Cost
- Easy to Manufacture

PCT Patent Filed...
Patent Office Opinion = 100% Patentable

Electric / Kinetic Energy Conversion

Electro*magnetic* Machine



Traditional Technology

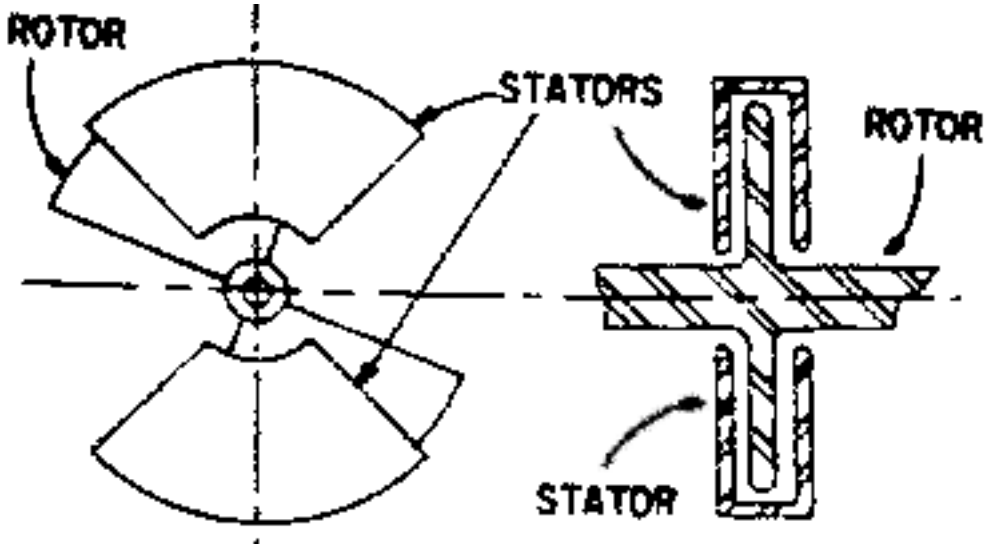
High Power Density

Current Driven

High Efficiency Possible
(But at Very High Cost!)

Primary Materials: Copper & Iron

Electro*static* Machine



Older, But Little Used Technology

Lower Power Density

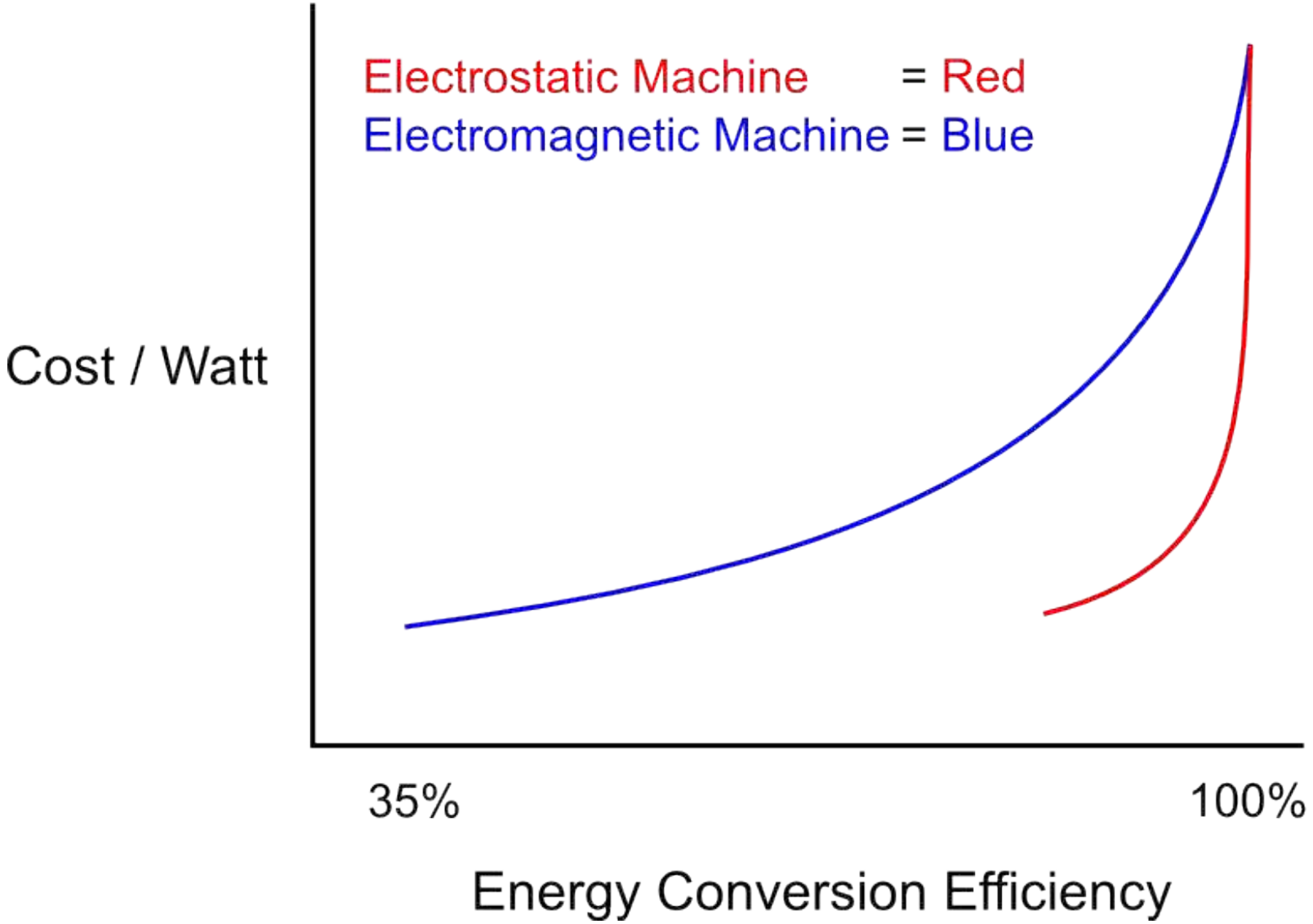
Voltage Driven

Inherently High Efficiency

Primary Materials: Ceramic or Plastic

Floating Rotor Electrostatic Motor Generator

Why not use a standard electromagnetic machine?



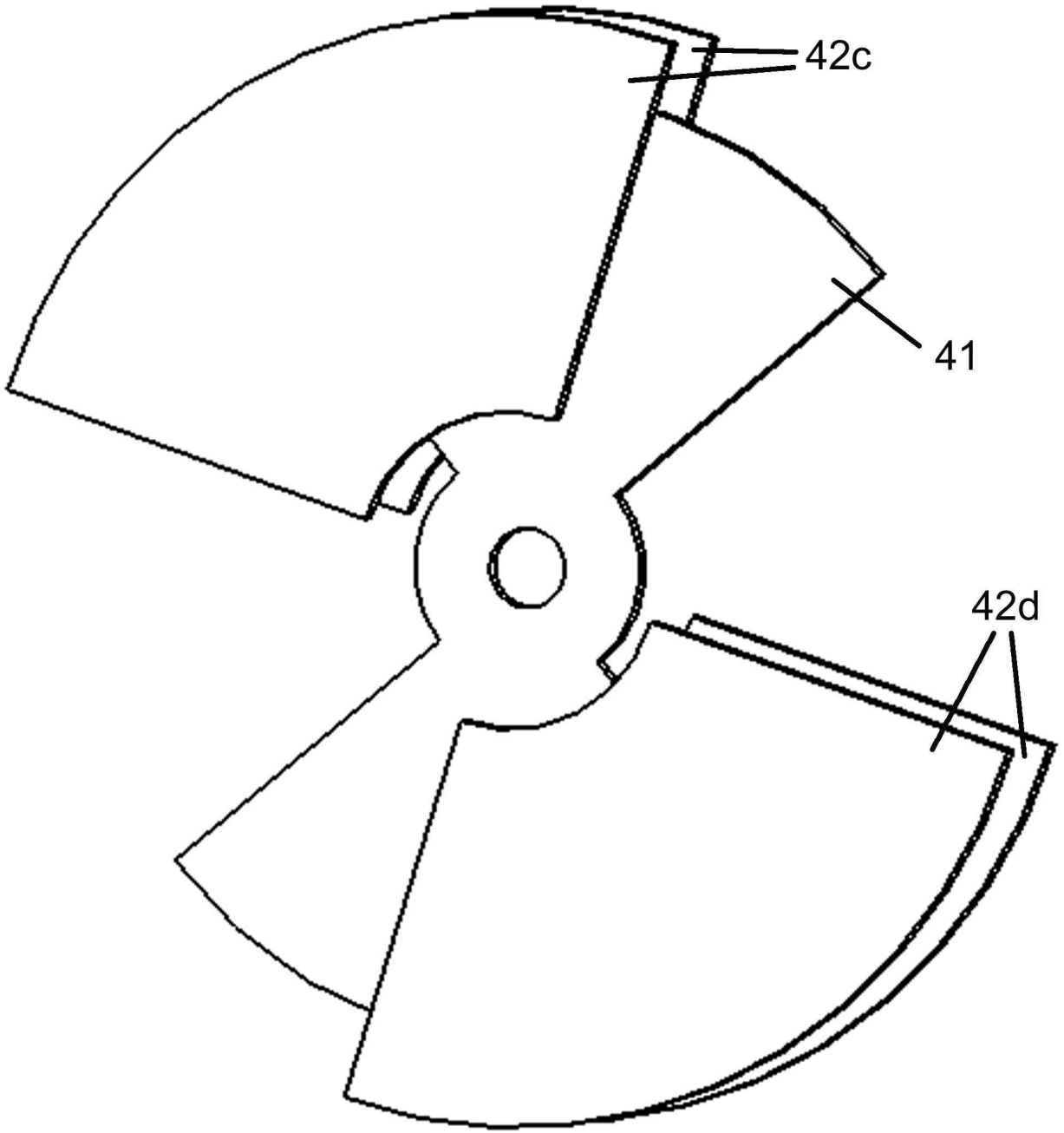
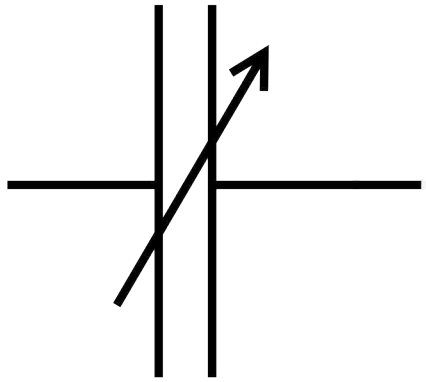
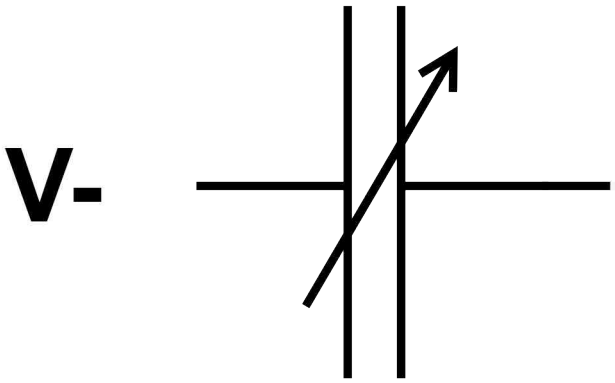


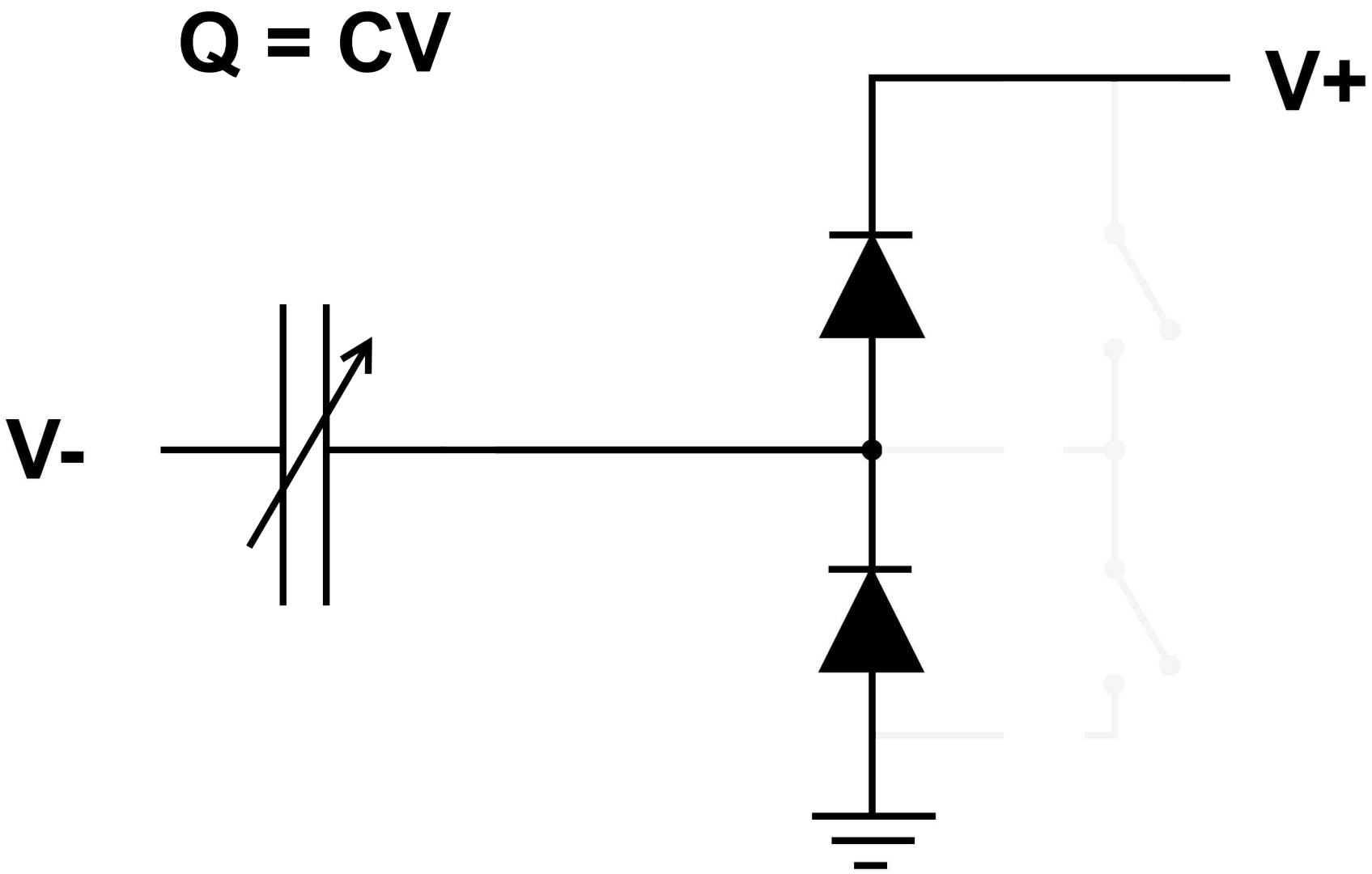
Fig. 4

Q = CV

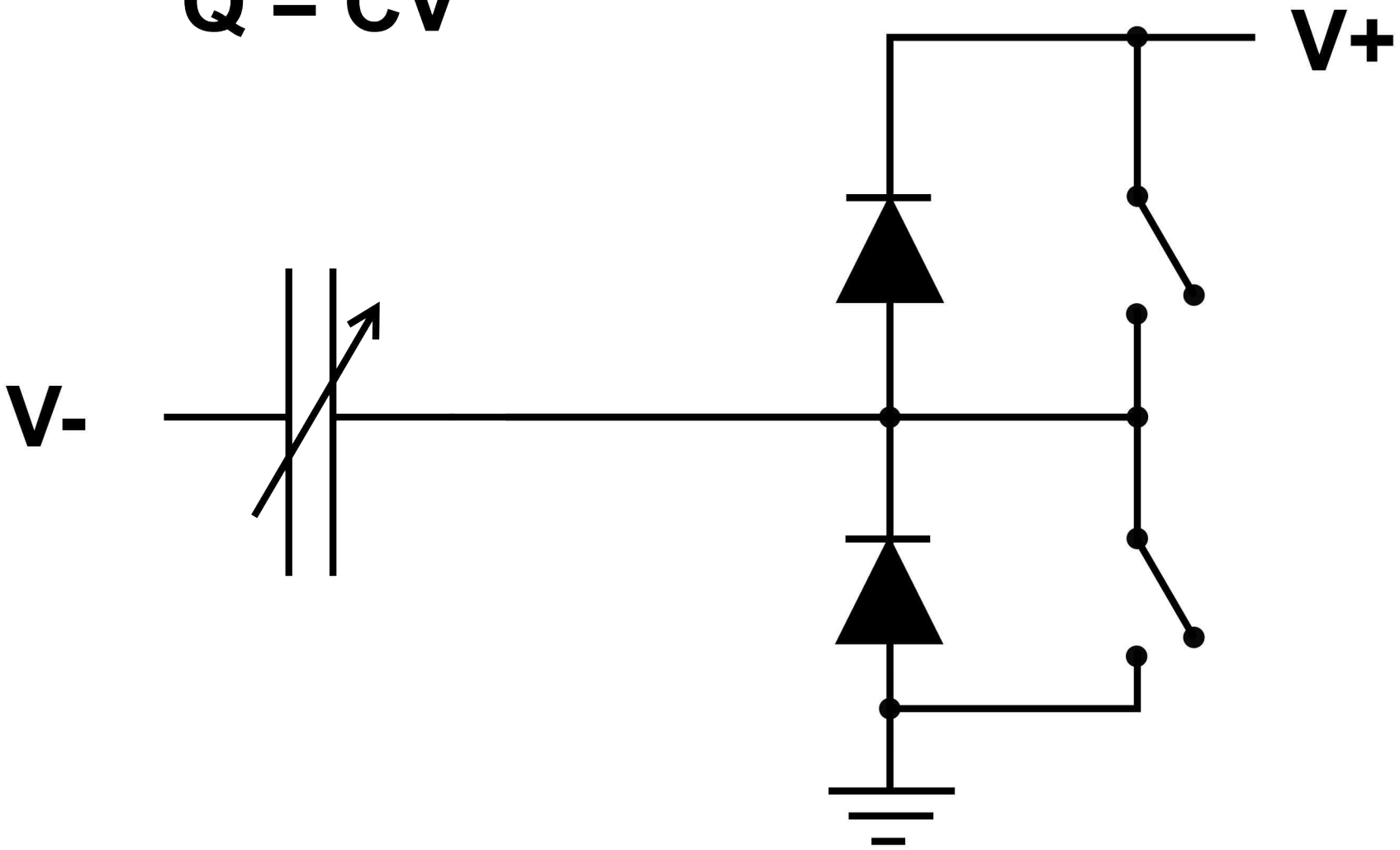


$$Q = CV$$




Q = CV
V+
V-

Q = CV



Thank you

For more information please visit...

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