



Wild & Farmed Salmon: A Field Guide to End-Use Efficiency Companies

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Companies in the energy efficiency & demand response environment are like wild and farmed salmon



- **Wild salmon** companies are driven and entrepreneurial:
 - Revenue comes from investors and the open market

- **Farmed salmon** companies prefer a dependable support structure:
 - Revenue comes from public funding, research grants, subsidies

➤ *Which has a better chance of thriving in the long run?*



How do wild salmon survive?

Start-up resources for wild salmon companies come in a variety of forms:

- Self-funding
- Loans, venture capital, and corporate venture investment
- Support by cleantech incubators
- Prizes such as the Cleantech Open
- Shareholder purchases of company stock

➤ Ongoing revenue comes from customers, and requires continuous focus on customer needs



How do farmed salmon survive?

Startup and ongoing funding for farmed salmon companies comes from research, development, and demonstration project sources such as:

- California Energy Commission's Electric Program Investment Charge (EPIC) Program
- State Energy Efficiency and Conservation Block Grants
- Department of Energy's Advanced Research Projects Agency—Energy (ARPA-E)
- Federal assistance from the Office of Energy Efficiency and Renewable Energy
- New York State Energy Research and Development Authority (NYSERDA) programs

Some farmed salmon companies also benefit from rebates, subsidies, credits



Born to be wild: advantages of wild salmon companies

Wild salmon companies strive to create market value:

- The open market makes them self-sustaining-- by creating value for customers, they are free from reliance on grant renewals or rebate funding cycles
- They can respond more quickly to changes in customer needs without the confines of research proposal scopes and schedules
- Competition promotes continual improvement in products and services, and drives “survival of the fittest”
- Strong companies inspire and drive the creation of new strong companies

Some drawbacks:

- Riskier - products must sell and yield a return on investment
- Requires continuous focus on customer needs and market conditions



Up on the farm: advantages of farmed salmon companies

Farmed salmon companies strive to develop expertise outside of market pressures:

- The costs and risks of applying for funding are clear and predictable
- Competition peaks at the application step
- Proposals must be focused and achievable, while peer review ensures that funding is awarded on merit, driving another version of “survival of the fittest”
- Public outcomes provide visibility for a few compelling technologies and may lead to additional funding
- Timelines are relatively long and relaxed

Some drawbacks:

- Dependence on external funding
- No sense of urgency exists to bring the product to market

Wild salmon companies multiply rapidly

Recently funded energy efficiency & demand response startups:

2006

- Hycrete

2007

- EnerNOC (IPO)
- Serious Materials

2008

- Adura Technologies
- Calstar Cement
- EnergyHub
- HID Labs
- Integrity Block
- Microstaq
- Recurve

2009

- Aspen Aerogels
- Control4
- EcoFactor
- EnOcean
- Illumitex
- LUMEnergi, Inc.
- NovaLED GmbH
- Power Assure
- Richards-Zeta
- SAGE Electrochromics
- Synapsense
- Tendril
- Topanga Technologies

2010 - Q1 & Q2

- 4Home
- Akuacom
- Better Place
- BridgeLux
- Ecobee
- EMME
- Glacier Bay
- Lemnis Lighting
- Luminus Devices, Inc.
- Lucid Design Group
- Passiv Systems
- Verdiem

➤ *Wild salmon companies can thrive even in weak economic times*

Some innovations require both farmed and wild salmon

An example - the evolution of light-emitting diode (LED) technology:

Decades of research & development on LED technology improves performance and lowers costs



LED becomes an economical and superior choice for specialized uses such as traffic signals

These successful applications of LED technology drive research & development for consumer lighting products

LED technology improves, and consumer products become more reliable, efficient, and affordable

LED companies enter the market with competitive consumer products



So which is best: wild or farmed?

Both wild and farmed salmon play important roles in the energy ecosystem:



• Wild salmon companies:

- Bring proven products and services to market
- Innovate on existing concepts
- Develop game-changing and interdisciplinary products and services

• Farmed salmon companies:

- Advance the objectives of research, development, and demonstration projects
- Develop new applications for energy efficient technologies

Wild or farmed: where do you fit in?

Who are you?

- Do you seek risk and change?
- Are you a salesperson?
- An entrepreneur?
- Does cutting-edge technology motivate you?
- Do you seek stability, consensus, and longer time cycles?

What is your business?

- Are you building a product to meet customer needs?
- Are you striving to advance and refine technologies?



Wild salmon



Farmed salmon



➤ *Knowing your strengths is essential to success in the energy ecosystem.*



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