

Green Jobs: Re-energizing the American Economy

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The Face of Green Jobs, an Industry Perspective

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The Goal

Buildings and Vehicles...



...that are **Resource-Efficient, Low-Carbon & Affordable**
...designed and built by **American enterprise**
...creating **high quality jobs**
...contributing to **healthy communities**



Green Jobs for energy efficient buildings



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People Today in Building Efficiency



Business Development Manager
 Director of Energy Consulting
 Director of HR
 Director of Sales & Marketing
 Emissions Energy Engineer
 Energy Program Manager
 Energy Solutions Business Manager
 Engineer
 Field Sales Representative
 FM Customer Business Manager
 Senior Program Manager
 Senior Software Engineer

General Manager for Construction
 Lead Performance Assurance Engineer
 Lead Performance Assurance Specialist
 Lead Research Engineer
 Major Projects Account Executive
 Manager of Application Engineering
 Manager of Global Travel Services
 Performance Assurance Engineer
 Principle Engineer- software/firmware
 Product Manager II
 Service Technician
 Sr. Operations Programs Manager

Facilities Manager
 Program Manager
 Project Development Engineer
 Project Engineer
 Project Manager
 Regional Project Development Mgr
 Remote Operations Center Manager
 Sales Engineer
 Senior Energy Engineer
 Senior Energy Manager
 Systems Delivery Standards Manager
 Systems Team Leader

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“Sam” ...A Service Professional



Sometimes when things break, you find ways to make improvements to the whole system, and in the end, save more energy than if you just replace the defective part.

HVAC maintenance can correct problems that waste up to **11%** of energy used by buildings every year

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“Lilly” ...A Software Engineer



I helped to develop a computer program that minimizes energy use during peak demand hours and reduces unnecessary energy consumption.



Our management of **250 data centers** around the world has reduced operating costs by **40%** – and increased customer satisfaction by **13%**

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“John”... A Project Development Engineer

My job is to design and engineer and optimize whole building systems

Large scale buildings use a huge amount of energy, so it's important that they are as energy efficient as possible.

I'm designing a renewable energy systems



Since 2000, retrofits with guaranteed **energy savings** have prevented over **9 million tons** of greenhouse gases from entering the atmosphere

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Green jobs to manufacture HEVs & PHEVs



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Domestically, we are supply-base challenged for all electrified powertrain components

DC/DC Converter (Asia)

HV Battery (Japan)

Power Electronics (Asia)

Regenerative Braking (Asia/Europe)

Electric Motor (Asia)

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Advanced battery component sourcing: A similar, but improving situation

Electronics (Asia, Europe)

Battery Assembly (Asia, Europe)

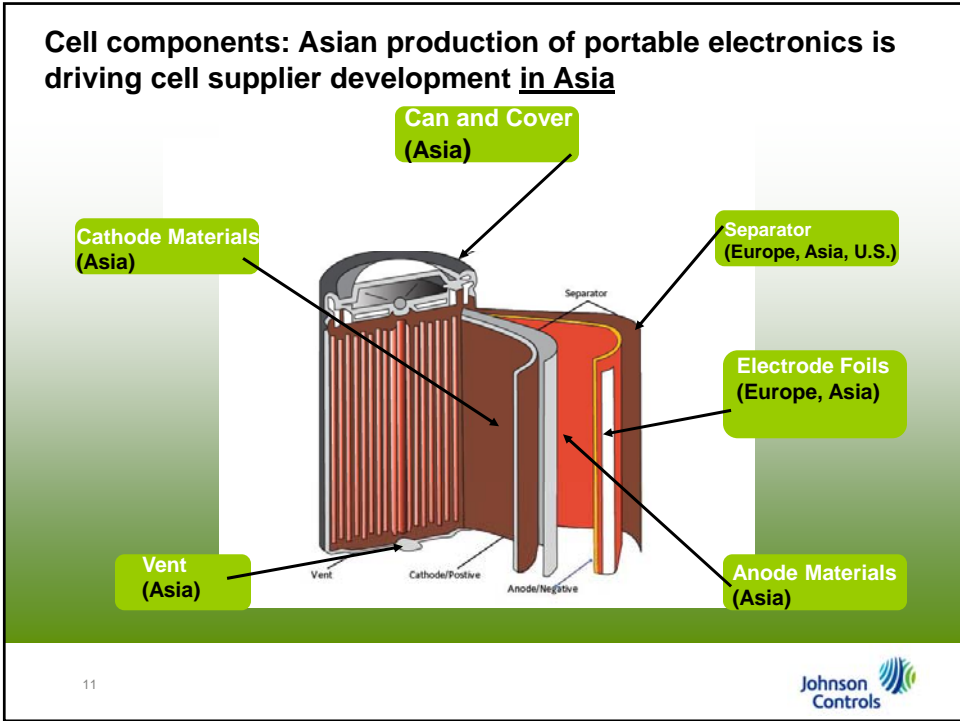
Wiring (Asia, Europe, USA)

Software (Asia, Europe, USA)

Mechanical components (Asia, Europe, USA)

Thermal Management (Asia, Europe)

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America must not swap today's oil cartel for an Asian battery cartel

Without a domestic manufacturing and supply base for advance battery systems and other critical components, our energy security will continue to be held hostage

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Building a Foundation for Buildings & Vehicles

Elements for Tomorrow's Sustainable Infrastructure

Comprehensive, consistent and complementary...



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For Efficient Buildings



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To Advance HEVs and PHEVs

Legislation & Regulation

- Implement energy efficiency and CO₂ reductions
- Maintain high CAFE standards
- Support for R&D, demonstration and deployment of advanced tech vehicles

Incentives & Investments

- Establish domestic supply base for critical components
- Incentives for manufacturing & consumer purchases

Technology & Information Standards


- Develop standards for battery systems and other components

Workforce/Supplier Training Initiatives

- Increase engineering talent
- Implement education curricula to be competitive

Partnerships

- Create Centers of Excellence: National Labs, Universities & industry

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Not just individual programs – a Strategy

Elements for Tomorrow's Sustainable Infrastructure

Comprehensive, consistent and complementary...

Legislation & Regulation

Incentives & Investments

Workforce/Supplier Training Initiatives

Technology & Information Standards

Partnerships

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