



Five Big Goals Research Program:

Mapping a Transformative 2040 Infrastructure Vision

Quality infrastructure is essential to local economic vitality and quality of life. The reality is that to keep our society and economy functioning, we are going to have to spend billions of dollars on our infrastructure in the Pacific Northwest. The implications of this spending for our economy and our environment are enormous.

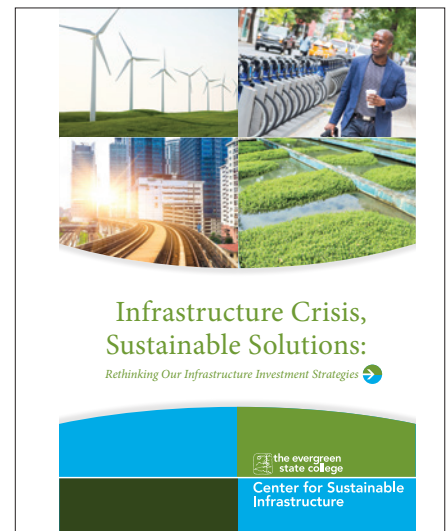
Replicating 'business as usual' infrastructure strategies will lock in unnecessarily wasteful, polluting, expensive, and vulnerable systems for decades to come. **The question is: How do we get smart about how we'll invest that money?**

Infrastructure investments across our transportation, energy, water, and waste systems add up to a generational legacy. Many projects are designed to last for 25 years or more. The billions of dollars we spend in Oregon and Washington year-upon-year between now and 2040 can, added together, almost completely renew our infrastructure systems and reshape our built environment.

Thinking forward 25 years, we have an opportunity to fully reimagine these systems to be much more sustainable, resilient, and affordable. To get there, we need to build alignment around a vision for how our infrastructure systems will work in 2040 to help us ensure near-term investments are moving us where we want to go in the longer-term.

During 2014, the Center for Sustainable Infrastructure at The Evergreen State College formally interviewed 70 of the region's top infrastructure innovators and thought leaders. Our report based on these interviews, *Infrastructure Crisis, Sustainable Solutions*, is already driving a new conversation about rethinking our region's infrastructure investments.

- ➔ Now the Center is launching a **Five Big Goals** Research Program to engage the Northwest's best and brightest in mapping the path to achieve a transformative 2040 infrastructure vision.
- ➔ We will dive deep on each goal, harnessing the insights of top innovators and thinkers, and distilling the shared knowledge vital to wide adoption of innovation in special reports for each goal, rolled out every 6 to 8 months.
- ➔ These reports will provide both inspiration and guidance to current and future infrastructure decision makers and leaders.



"Interested in getting 95 percent of your energy from renewables, reducing water use by 60 percent, transforming sterile neighborhoods into walkable urban villages, and keeping 90 percent of everything out of landfills? The Center's inaugural report imbues infrastructure (an appallingly boring word) with a bold, new, powerful meaning, and offers an exciting vision of how to build a resilient, sustainable future."

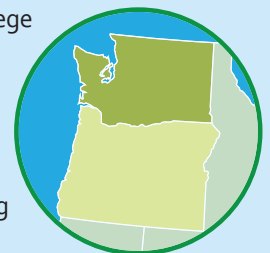
—Denis Hayes, President and CEO, The Bullitt Foundation



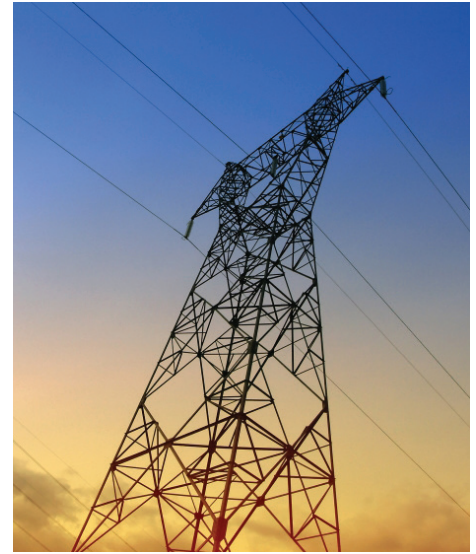
**Center for Sustainable
Infrastructure**

The Center for Sustainable Infrastructure (CSI) at The Evergreen State College (evergreen.edu/csi) champions a transformative infrastructure paradigm and new discipline for infrastructure investment. We believe Washington and Oregon can become national leaders in sustainable infrastructure

innovation. CSI is working to provide thought leadership and tools to build a future of sustainable, resilient, affordable, and integrated infrastructure systems that will provide vital services accessible to all—supporting healthy, prosperous, beautiful, and inclusive communities.



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FIRST UP: *Energy Infrastructure Transformation*

First up among the five reports will be the Energy Goal. The framing question, which CSI will pose to top Northwest energy thought leaders, is:

How can the Northwest build one of the world's most sustainable, resilient, and affordable energy systems by 2040?

The energy sector is poised for fundamental changes as new 'disruptive' technologies enjoy explosive growth—from solar photovoltaics to new battery technologies, electric cars, and soon perhaps even driverless vehicles. Smart technologies are enabling an 'Internet of Energy' that networks millions of points of energy production, use, and storage with instant communication and response capability.

Silicon Valley entrepreneurs and investors are now aggressively pursuing business models they hope can carve out lucrative footholds, and tech giants like Apple and Google are probing for rich opportunity as well. Meanwhile, energy efficiency technologies can reduce demand nationwide 40-60% below projections for 2050, according to an American Council for an Energy Efficient Economy study, at a net cost savings of \$400 billion per year. **How valid are the assumptions undergirding this and other studies, and how applicable are they to the Northwest's power grid, economy, and institutional context?**

The 25-35 thought leaders and innovators the Center will interview for the Energy Goal report will include top Oregon and Washington utility executives, NGO leaders, business innovators, regulators, analysts, and agency leaders. These thought leaders will help answer crucial questions, such as:

- **In 2040, how will a world-class sustainable, resilient and affordable energy system in the Northwest differ from today's?**
- **What's the right 2040 goal -- should we aim for a carbon-free electric grid and for 90% of transportation energy to be carbon-free or carbon-neutral?**
- **What are our most affordable paths to achieve this goal?**
- **How can we generate the greatest economic benefits from the transition?**
- **What do we need to do to build a highly-skilled energy industry and address the coming retirement wave?**

These reports will be funded by a combination of agency sponsorships, gifts from major donors, and foundation grants. Please contact Center Director, Rhys Roth (rothr@evergreen.edu; 360-480-6749), to inquire about supporting the program.