Reinventing the Grid

Santa Fe Institute Workshop

Nominally the work of Seth Blumsack (Penn State), Paul Hines (UVM), Cris Moore (SFI)

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Without Which None of You Would Be Here

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• Bruce Bertram and Cris Moore in particular;
• You all!
Resilient Grids in Action
Bigger Grid = Better Management?

North American Regional Transmission Organizations

Source: Created in Energy Velocity
Updated: July 14, 2014
Democratization of Electricity?

Why rooftop solar is disruptive to utilities – and the grid

With rooftop solar installations scaring, utilities are nervous – for a few reasons. Greens MPs, CC BY-NC
Better Adaptive Capacity

• Right balance between democratized and centralized production?

• Defining and measuring {reliability, resilience, robustness}

• Creative engineering: time to let the rest of the world in!
Welcome to Santa Fe! We do things differently around here…

• Pedagogical talks from ecology, the maker movement (and power grid people)
• Research talks from creative people (half of whom claim to know nothing about the grid)
  • Short
  • Provocative
  • Plenty of discussion time
• Other housekeeping items?