



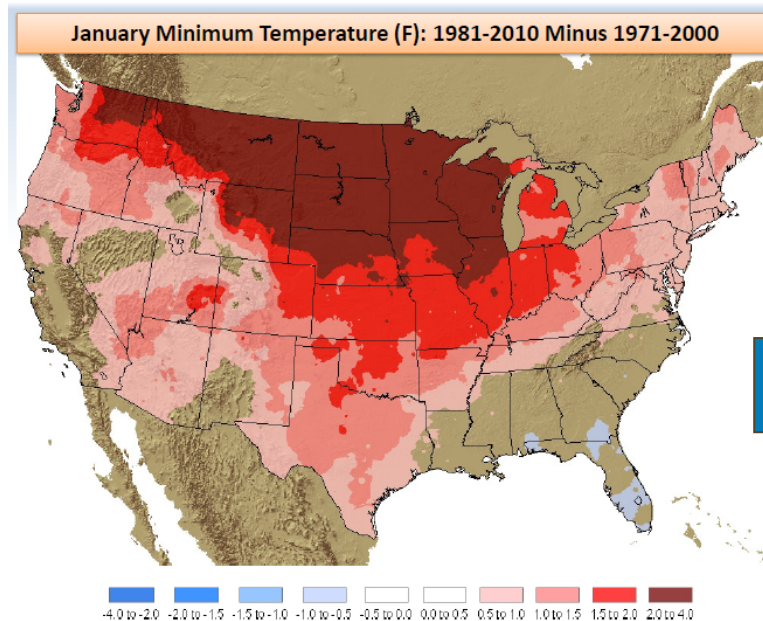
Bridging the gap between industry needs and climate products

Joe Casola
ICF International

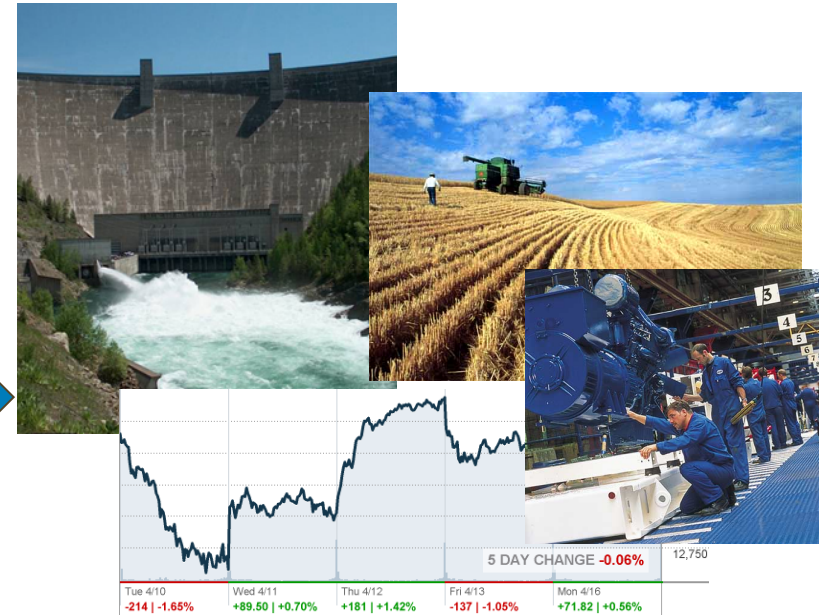
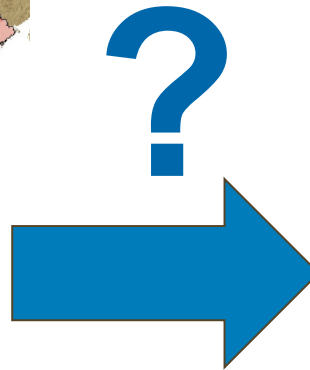
Alternative Climate Normals and Impacts to the Energy Industry

April 25, 2012

What does ICF do?



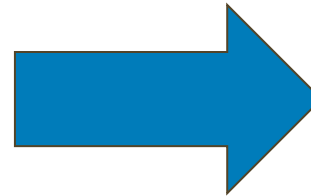
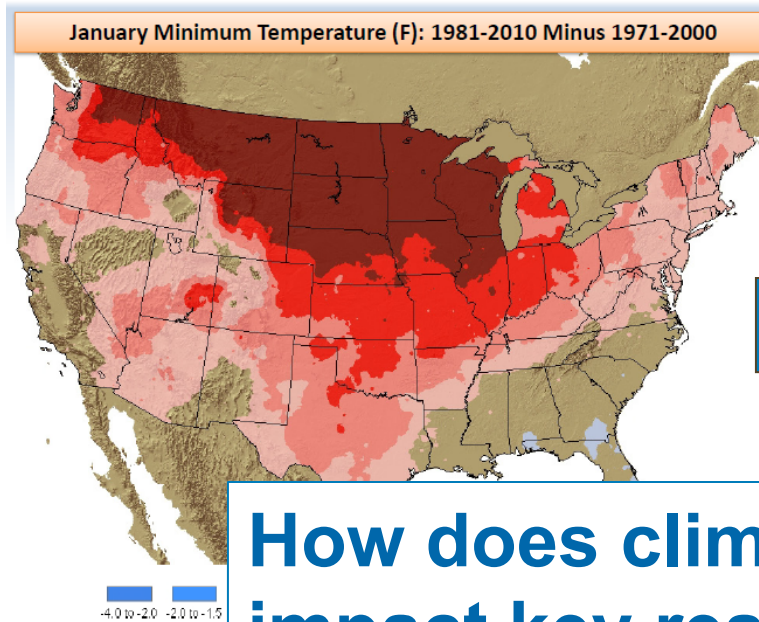
Climate Information



Management Decisions

Map image: NOAA, 2011. Karl Briefing <http://www1.ncdc.noaa.gov/pub/data/cmb/bams-sotc/2010/tom-karl-capitol-hill-briefing.pdf>

What does ICF do?



How does climate information impact key resources? For customers? For the supply chain? What does it mean for the bottom line?

cisions

Finding the right tool for the job



Are we vulnerable?



What should we do, strategically?



O&M planning & implementation



How vulnerable are we?

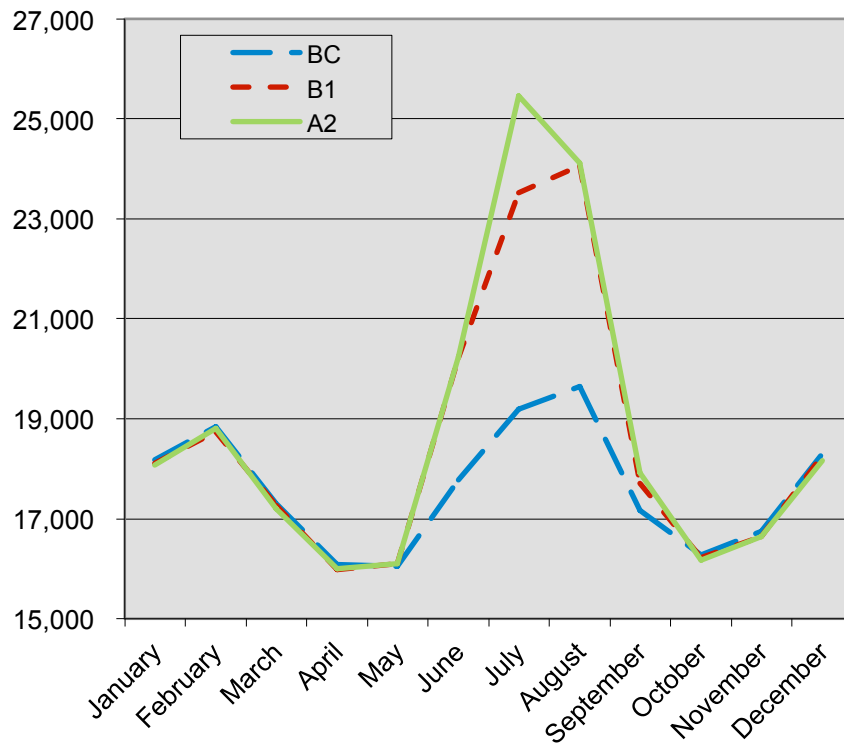
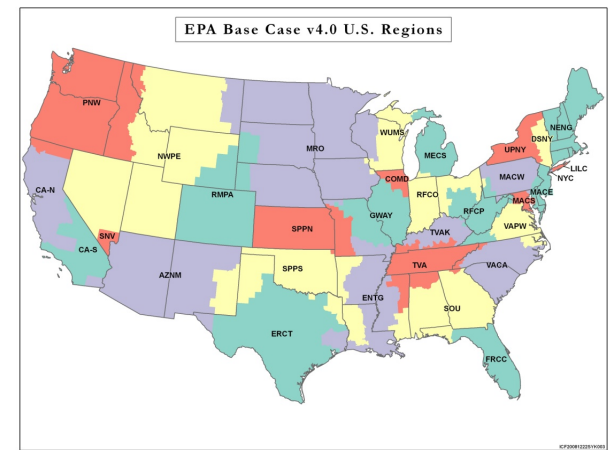


Engineering design & construction

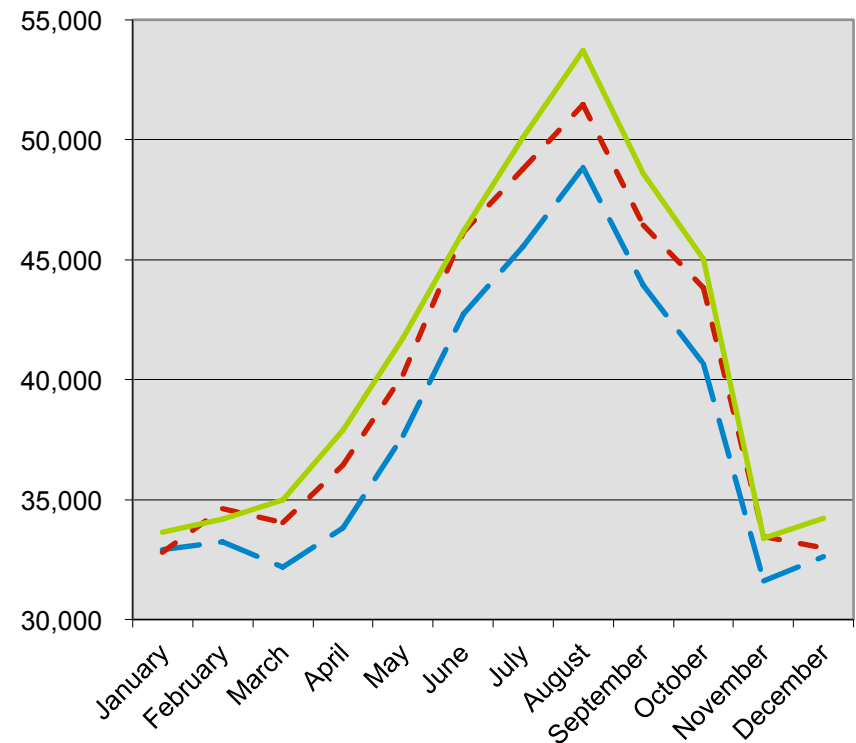


Example: Electricity Demand (IPM)

*Projected regional changes in monthly HDD/
CDD used to model changes in electricity
demand through 2050*



Average Monthly Load (MW) for New England (NENG IPM Region) in 2050

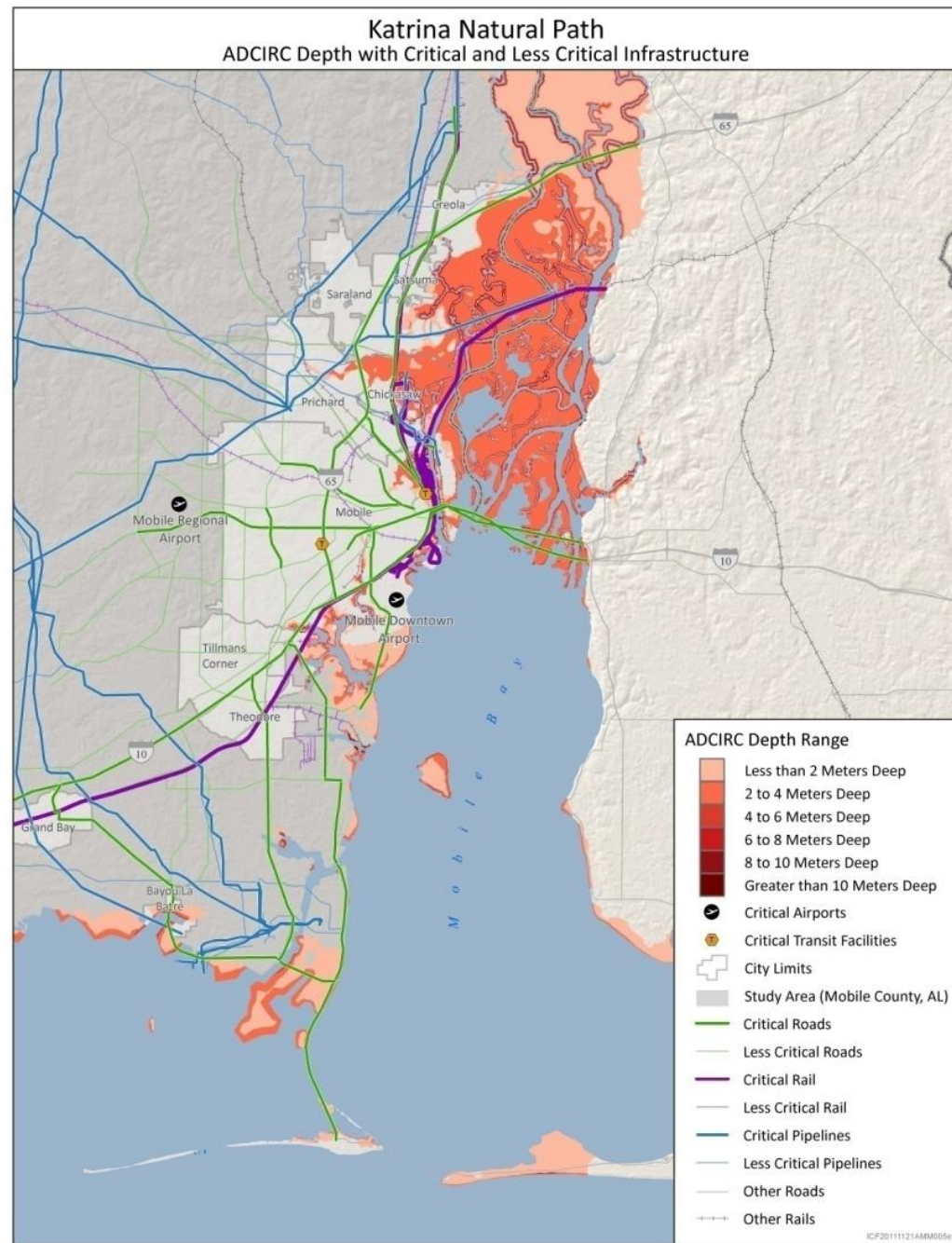


Average Monthly Load (MW) for Florida (FRCC IPM Region) in 2050

Example: Gulf Coast (US DOT)

Simulation of storm surge from Katrina

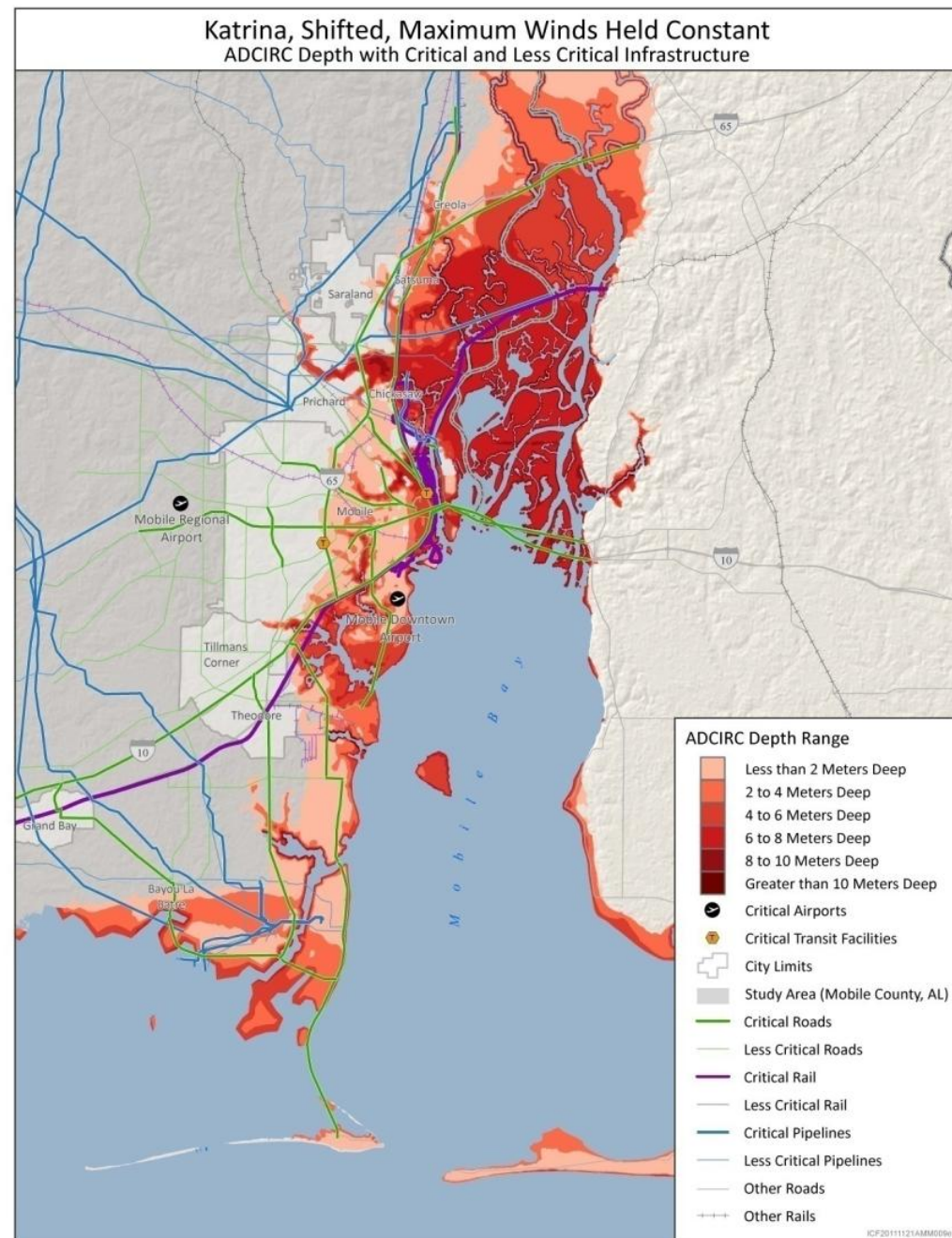
*Map produced by South Coast Engineers.
Draft results, do not cite or quote.*



Example: Gulf Coast (US DOT)

**Simulation of storm surge
from Katrina, shifted track with
maximum winds**

*Map produced by South Coast Engineers.
Draft results, do not cite or quote.*



Key challenges



1) Planning is often sensitive to local-scale variables, beyond just temperature and precipitation – how can climate information be made more “**decision-ready?**”

EX: daily CDD, tropical storm tracks, storm surges

2) The tails of the probability distribution often represent impacts of significantly greater magnitude – can information about **changes in extremes and/or the overall distribution** also be communicated?

EX: heat waves, design storms

Key challenges

3) Effective use of climate information is a two-way street –

Tools/data can facilitate decision-making,

AND parameters of decision-making should drive the selection of tools/data...

