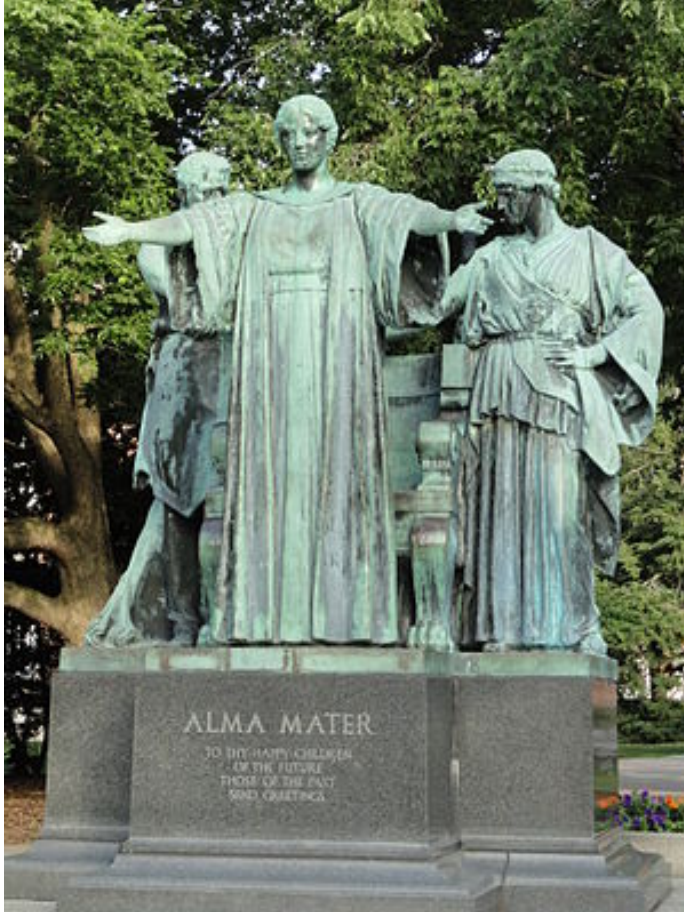


Brian Keel

Keel Transmission Solutions, LLC

The Journey to Power World

University of Illinois



- BS and MS in EE, Power Systems
- Grad Student for Prof. Pai

First Engineering Job!



- Charlotte, NC - 1.5 Years
 - NRC Engineering calculations on nuclear stations, McGuire
 - Learned compliance
 - First AHA Moment!
 - Manager asked me meaning of answer!?
-
- Role of engineer!

PSI Energy – Plainfield, IN – 8 Years

- Generation Planning - 1995 was 5 year planning horizon
- Transmission Planning
- Rural System 69kV lines up to ~60 miles
- **Initially PSS/E** Extremely Poor Customer Service
- Only Engineer in group using stability
- With Merger with CG&E **Added GE PSLF**
- Performed planning for Southern and Western IN

PSI Energy – cont.

- Started learning about reliability, TRELLS (TRANS Care)
- Extensive experience with PSS/E and PSLF:
- Concluded:
- **PSS/E** Very expensive, poor customer service
- **PSLF** excellent customer service and much cheaper!
- Customer Service, One engineer

Salt River Project – 1998



- Transmission Planning Engineer
3 years
- Nov, 2001 – Manager
- Accelerated Planning Experience
- 10 -14 Planners

SRP – cont.

- **WATS** – Chair
 - T and G interconnections across Southwest
- **NERC**
- Member of TPL001 -4 SDT
 - 2004 - 2012
- Member of TADS
- Elected member of PC
 - 2011 - 2013
- **WECC**
- Reliability Subcommittee, RS
- Chair – TRD
- Chair RPEWG
- Chair WECC – 0071, SDT
- Chair RS
- Planning Coordinating Committee, PCC
- Vice Chair, PCC
- Chair PCC

SRP – cont.

- 2016 – transitioned to Senior Principal Planning Engineer
- Authored SRP Transmission Segment Strategic Plan
- Westconnect member
- Hired Portland General Electric Planner
 - Introduced Power World to SRP
- Adopted Power World for Westconnect 10 year base case review

Keel Transmission Solutions, LLC

- **Power World**
- Area/Zone filtering
- Ribbon Tab Format
- Aux files
- Bus views
- Model Explorer
- Contouring!
- Line Loading Replicator! (TTC)
- Website training
- PSS/E & PSLF - case sharing
- Openness, transparent
- support@powerworld.com
- **PSLF**
- Experienced/requested sophisticated self – written automation:
- Automatically links transmission/generation outages to cases, solves, writes reports with results population, for planner approval
- WECC SOL Methodology

Keel Transmission Solutions, LLC

- Transitional NEEDS:
- Organization Name, Business Cards
- ACC Corporation, LLC
- EIN
- Turn down job offer
- Separate Bank Account
- WECC member
- E & O Insurance
- General Liability Insurance
- DUNS number
- Purchase Power World
- Simulator
- Stability
- Started website:
- keeltransmissionsolutions.com
- Marketing:
- Weekly blog (book) about general planning topics
- LinkedIn – adding blog, larger audience
- [Attend WECC meetings](#)
- [Attend This meeting](#)

Keel Transmission Solutions, LLC

- Future:
- Need to change RETIREMENT label.

- One contact thought I was out traveling the world, or fishing...
- I am at home in Goodyear, AZ in my office

- **Brian Keel**
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- **Brian@keeltransmissionsolutions.com**
- **Keeltransmissionsolutions.com**