

# TUoS Options: Locational Signals

16<sup>th</sup> June 2009

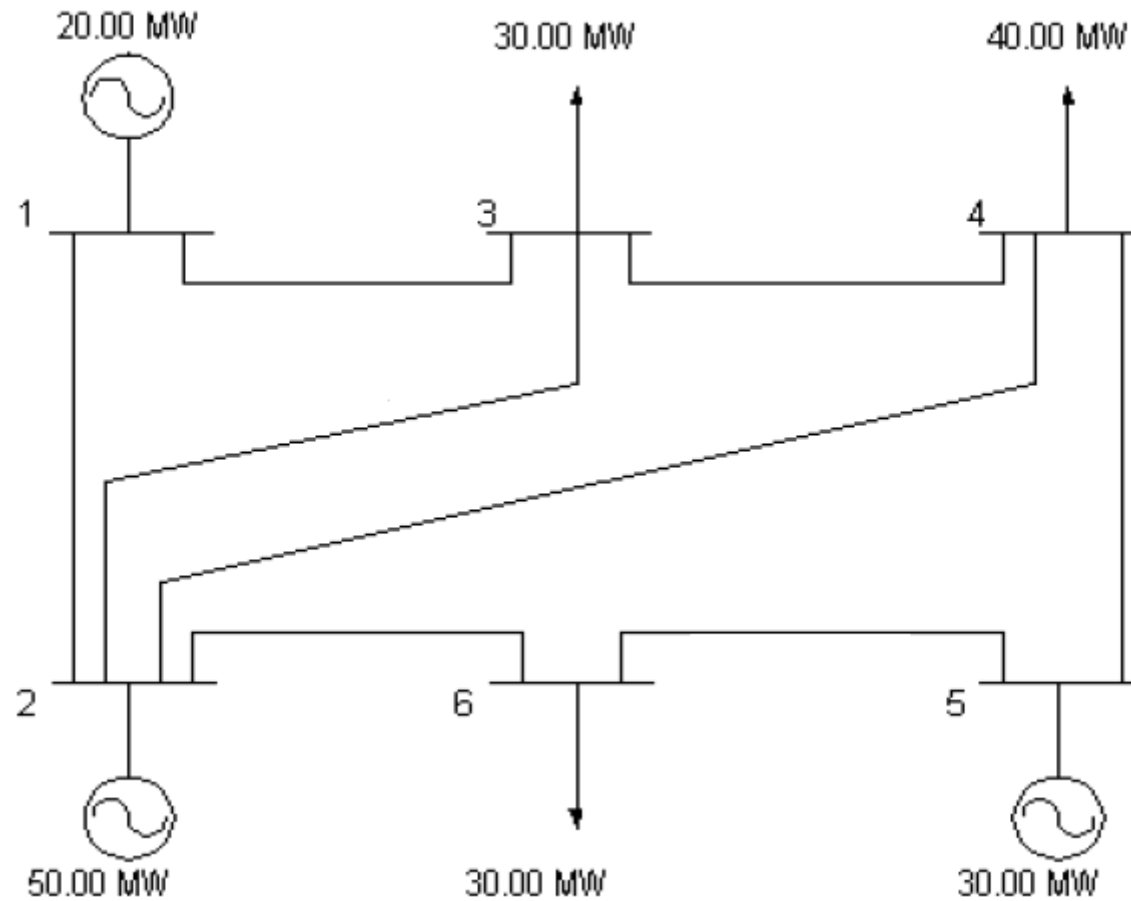
# Introduction

- Network Pricing & Network Planning
- Static model
- Dynamic model

# Static model

- Fixed generation and demand portfolio
- Fixed network to facilitate above
- Modern Equivalent Asset Valuation

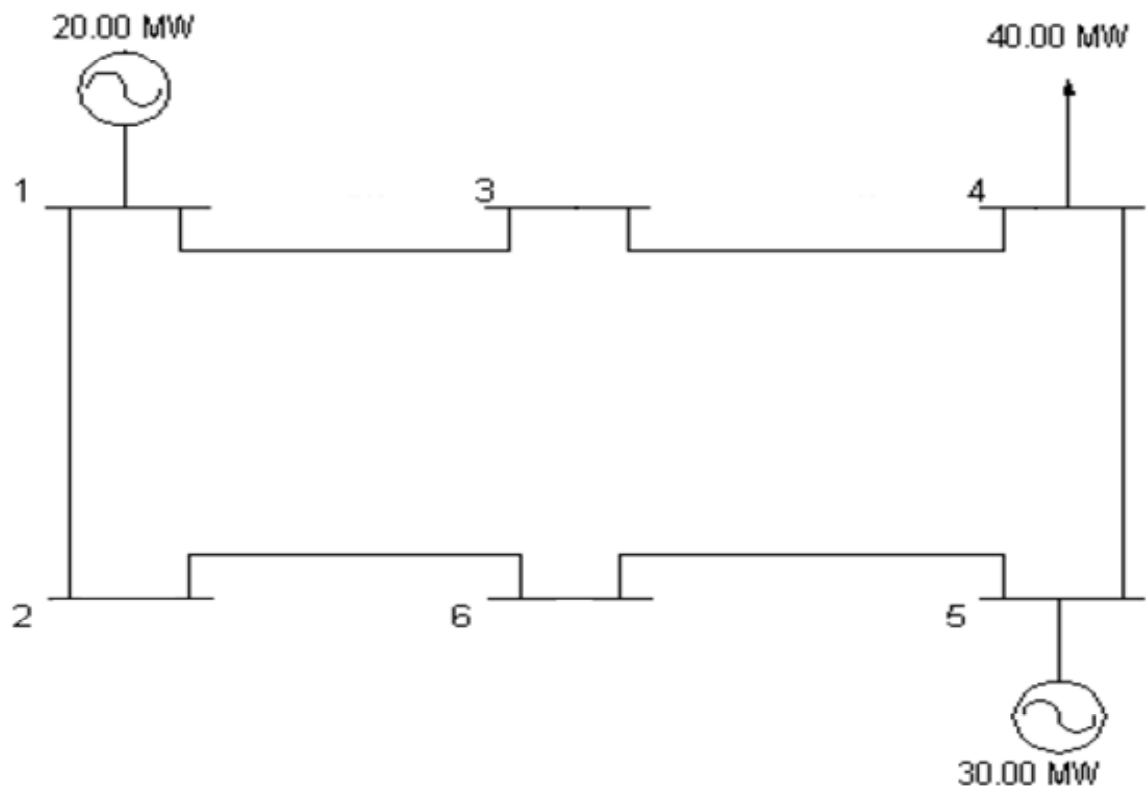
# Static model



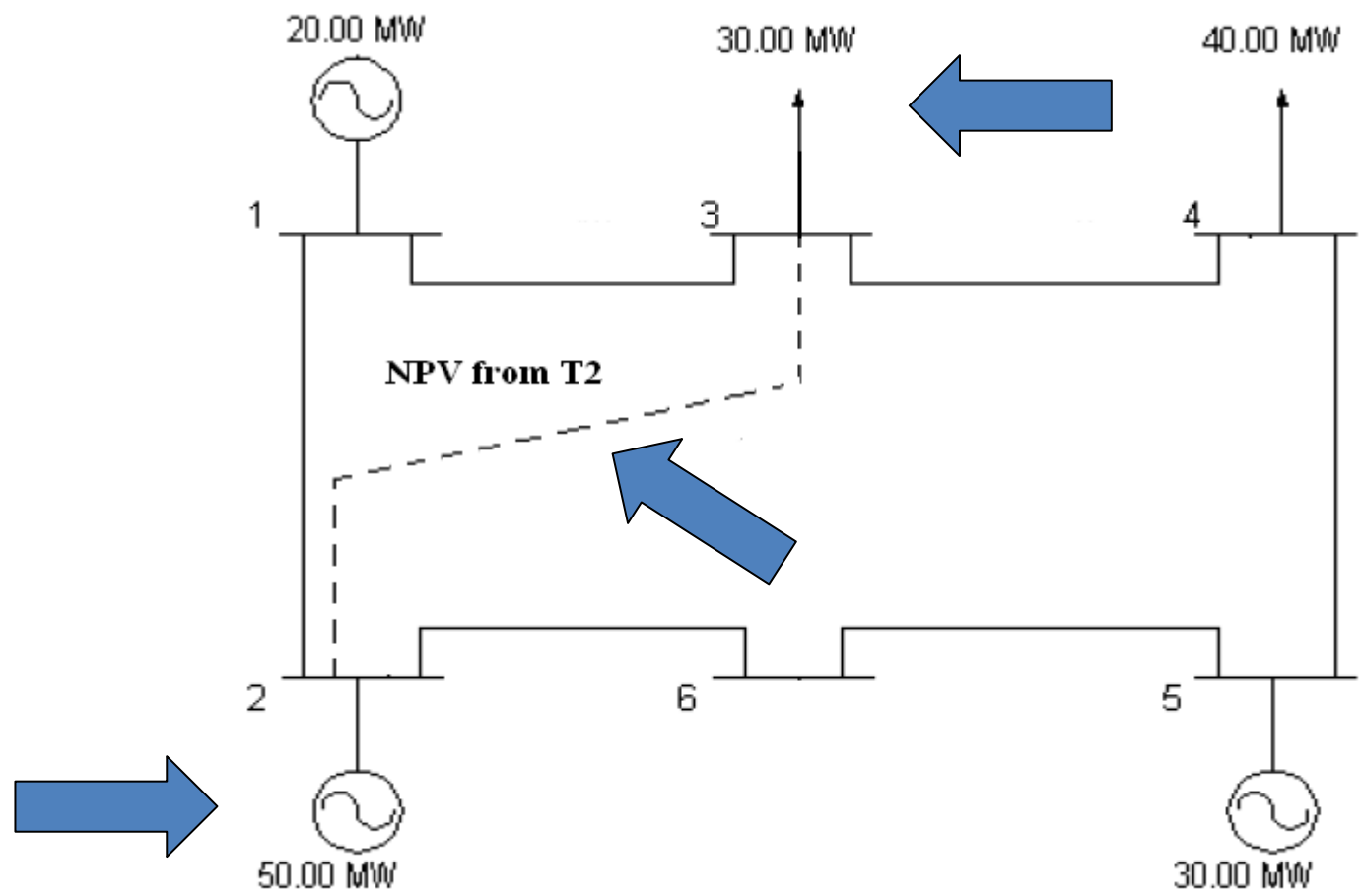
# Dynamic model

- Future reinforcements requirements
- Net Present Value
- Sunk decisions should not drive future decisions

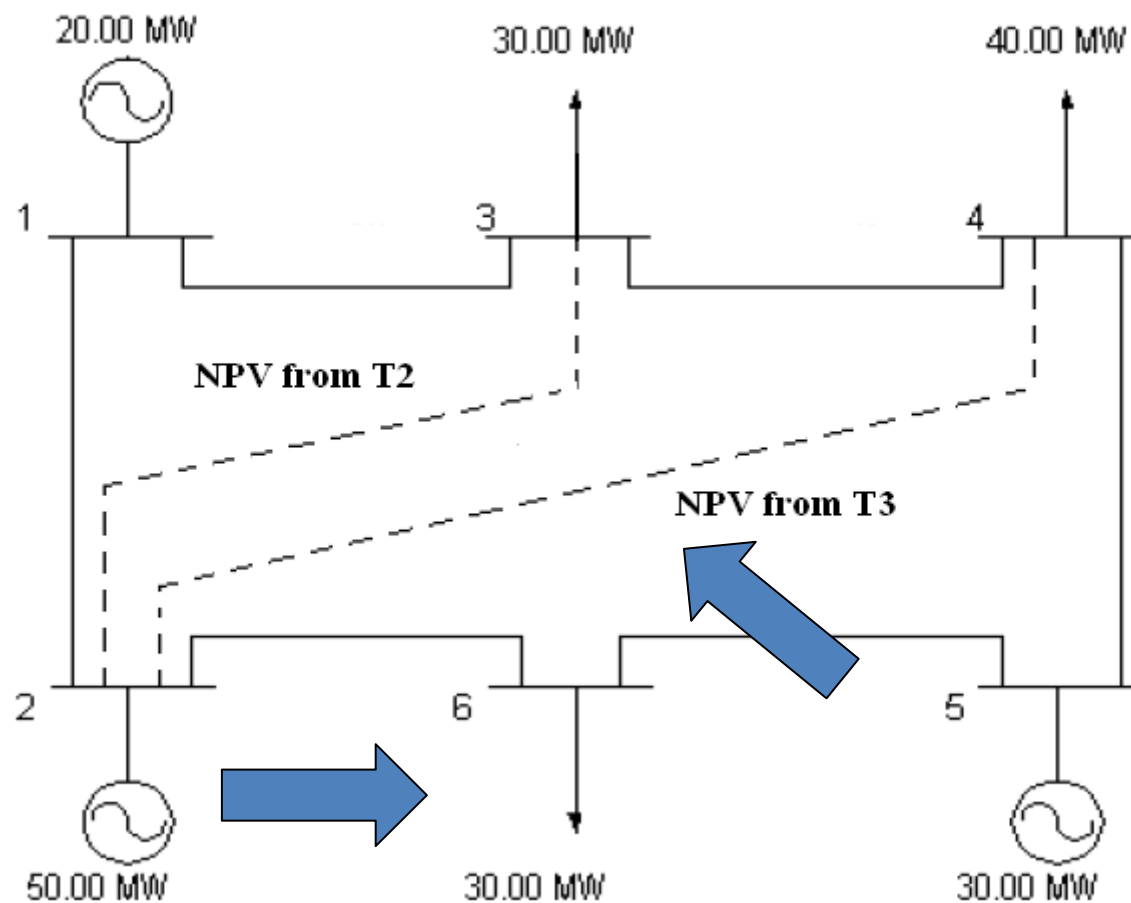
# Dynamic model: Time 1



# Dynamic model: Time 2



# Dynamic model: Time 3



# Dynamic model: NPV

- Average Cost
  - Reinforcement value in NPV terms
- Marginal Cost
  - Increment of power
  - NPV value of *change* in cost

# Marginal Cost Example

- Reinforcement = Year 10
  - NPV = €100,000
- **Now** reinforcement = Year 9
  - NPV = €110,000
- Valuation =  $\Delta$  Cost
  - €10,000 in NPV terms

# Revenue Reconciliation

- Tariff Revenue Requirement
- Pure Locational & Multiplier
- Locational & Delta/Postage Stamping

# Conclusion

- Consistency between pricing & planning
- Models are means to Value Network
- Revenue reconciliation

# Conclusion

	Cost Reflective	Efficient future investment planning	Transparent	Predictable	Non Volatile	Consistent between generator & demand customer
Pure Transmission locational signalling Static Model	M	M	M	M	L	H
Pure Transmission locational signalling Dynamic Model	H	H	M	M	L	H
Marginal Investment Cost Based Pricing (with Residual) Static Model	M	M	M	M	M	H
Marginal Investment Cost Based Pricing (with Residual) Dynamic Model	M	M	M	M	M	H