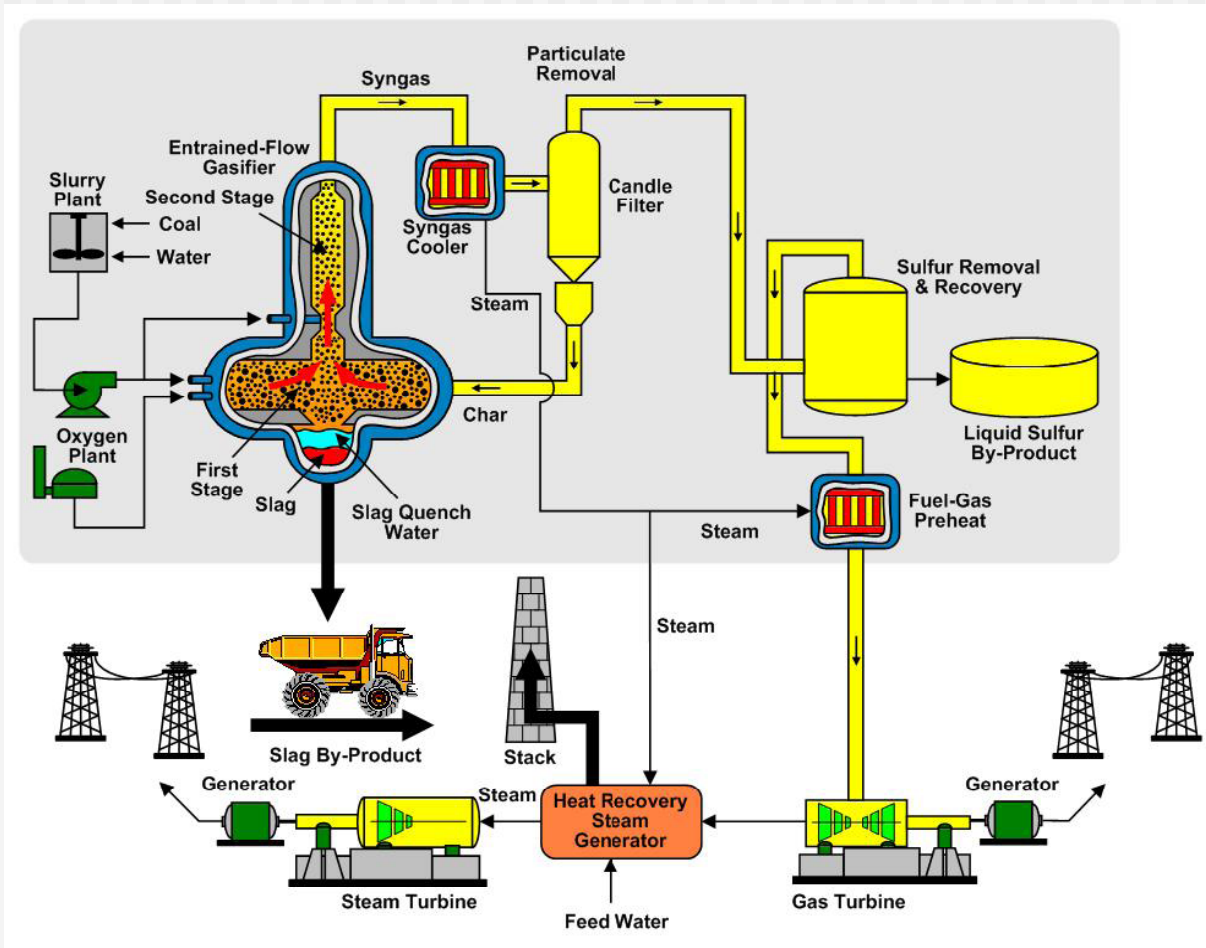


Today's Presentation

- Review of IGCC information
- Financial Analysis of IRP Cases
- Summary of Additional Study Issues
- Options for Study Completion

IGCC Process Diagram



Coal IGCC Power Plants

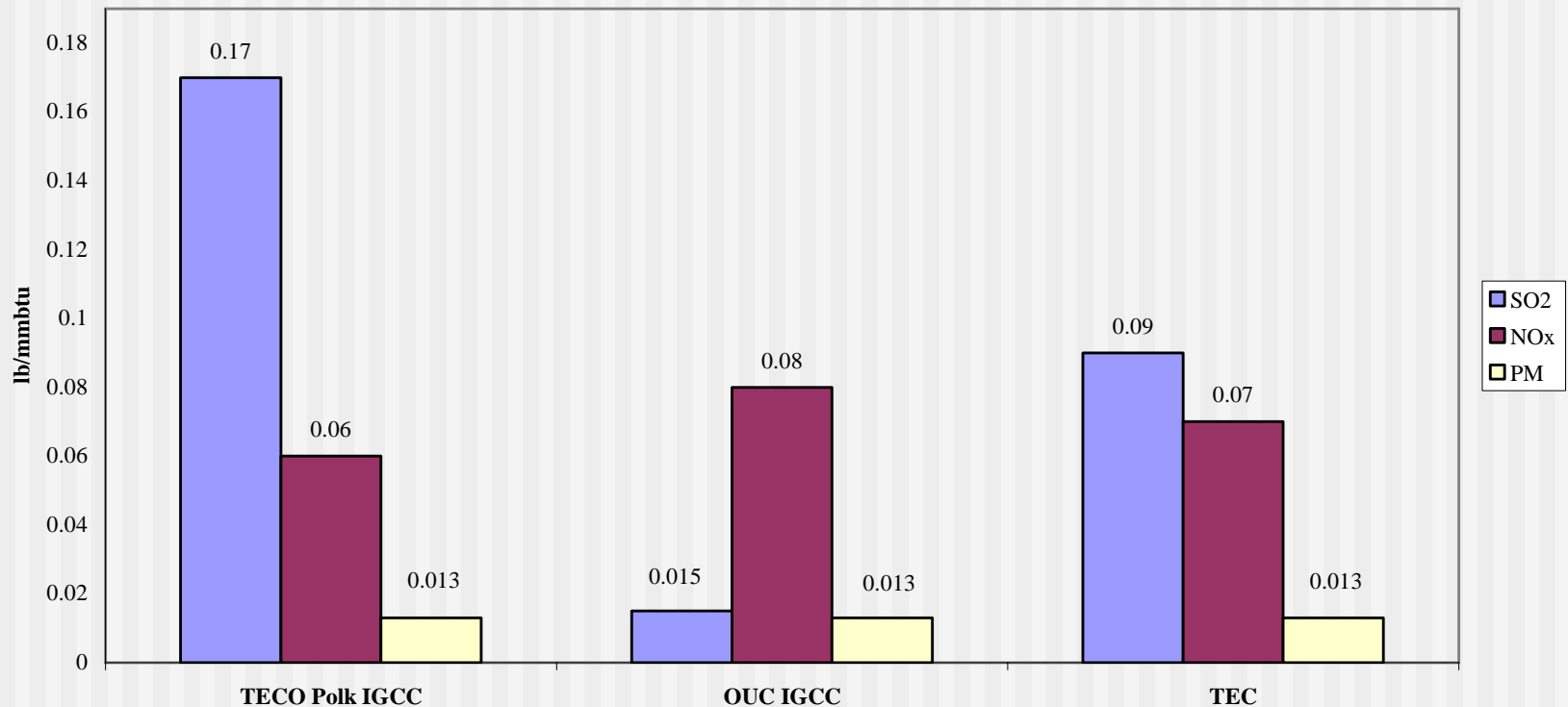
- Pinon Pine plant owned by Sierra Pacific Power – a 98 MW project that started in 1996. (This unit is not in operation at this time)
- Wabash River plant located in West Terre Haute, IN - a 262 MW project that started in October 1995
- Polk County plant owned by TECO – a 253 MW project that started in September 1996
- Demkolec plant in The Netherlands – a 250 MW project that started in January 1994
- ELCOGAS project in Spain - 310 MW project that started in December 1997.

IGCC Gasifier Availability

Comparison of gasifier availability & pulverized coal (PC) unit availability

| Units | Since Commercial Operation | 2000-2004 Timeframe | 2004 only |
|--------------------------------|-----------------------------------|----------------------------|------------------|
| TECO Gasifier | 67.60% | 73.18% | 81.60% |
| Wabash River Gasifier | 58.50% | 76.72% (2000 – 2003) | 82.40% (2003) |
| All PC Units 600 – 799 MW | | 83.98% | 83.62 |
| Top five PC Units 600 – 799 MW | | 92.13% | 97.19% |
| All PC Units 800 – 999 MW | | 89.43% | 85.98% |
| Top five PC Units 800 – 999 MW | | 91.88% | 97.62% |

IGCC & TEC Emission Rates



NOTE: emissions rates for OUC IGCC & TEC are proposed.

IGCC Summary of Issues

- IGCC technology review indicates strong potential for future power applications
- Currently there are factors that pose higher than acceptable risks to the City
 - Small number of operating units
 - Newer technology proposed utility scale units not yet constructed (no definitive cost or operating data)
 - Large unit sizes relative to the City's electric system
 - Limited joint project opportunities
- Staff recommends continued monitoring of the technology & industry experience

Rate Revenue Requirements

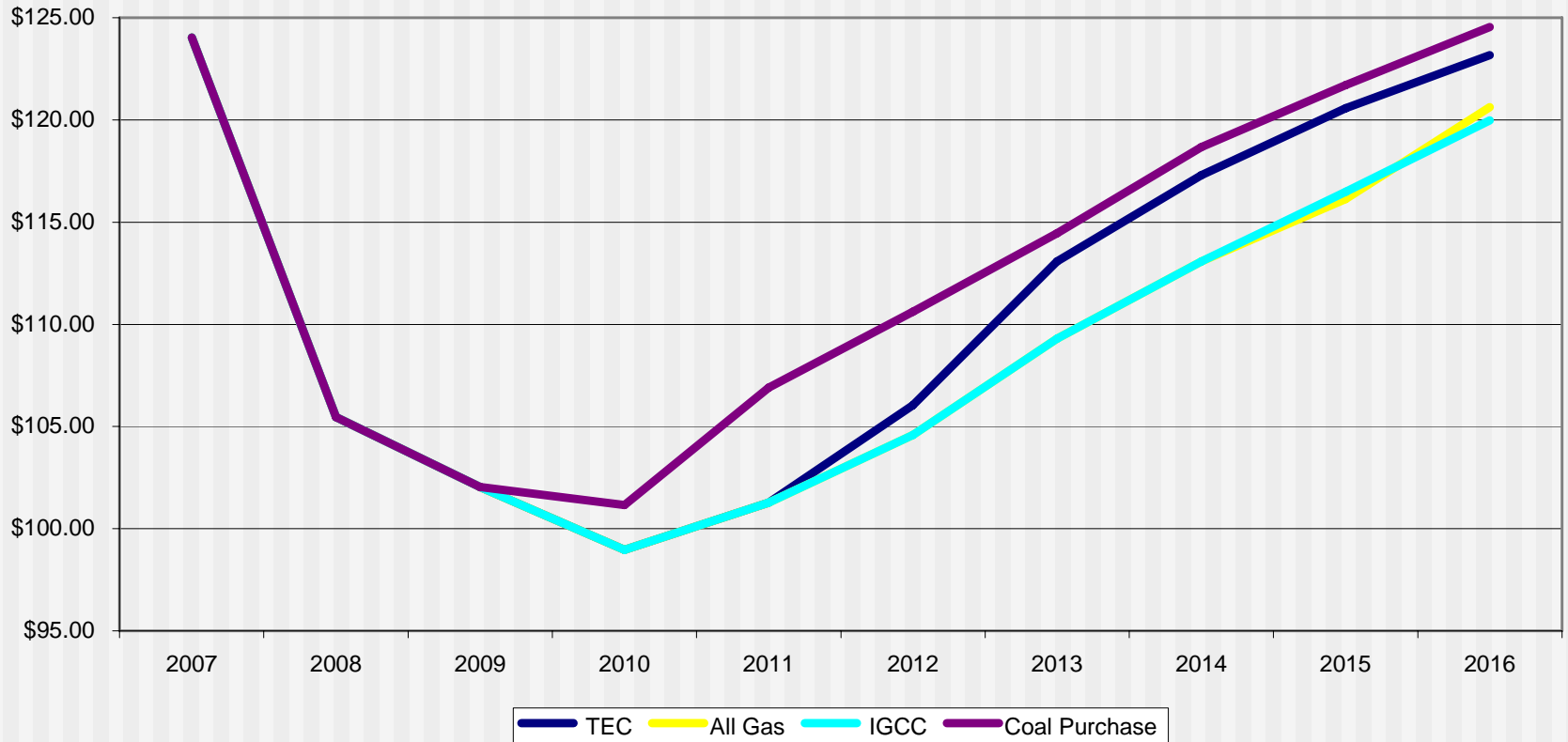
- Draft 10-yr financial projections (2007 – 2016)
 - developed using 5 year budget operating & capital requirements as a base
 - 10 year fuel prices provided by Energy Services
 - Debt service estimates provided by PFM through Treasurer-Clerk's Office

Comparative Projected Rate Revenue Requirements

- Purpose - compare system revenue requirement impacts associated with the current IRP Study alternative plans on a system \$/MWh basis 2007 - 2010
- Modified the 10-yr financial projections to reflect production related costs and assumptions from the IRP cases
 - Exception - funding of DSM portfolio
 - Exception - debt service projections for IRP cases

Comparative System Rate Revenue Requirements

(\$/MWh for Alternative IRP Plans)



Revenue Requirement Differences (\$/MWh from Gas Plan)

| Description | Fiscal Year Ending September 30, | | | | | | | | | |
|-----------------------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| | | | | | | | | | | |
| TEC | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$1.46 | \$3.78 | \$4.22 | \$4.45 | \$2.55 |
| | | | | | | | | | | |
| All Gas (Base) | | | | | | | | | | |
| | | | | | | | | | | |
| IGCC | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.36 | (\$0.64) |
| | | | | | | | | | | |
| Coal Purchase | \$0.00 | \$0.00 | \$0.00 | \$2.19 | \$5.63 | \$6.04 | \$5.17 | \$5.60 | \$5.58 | \$3.93 |

Note: cost differences for the IGCC Plan reflect delayed retirements in that case for 2015 and a new unit addition in the Gas Plan in 2016.

Revenue Requirements Summary

- For the period 2007-2016 there is relatively little difference between IRP cases
 - Operating cost savings offset much of the increased debt service for new unit additions
- Very small changes in gas prices eliminate any difference between the Gas Plan and the TEC Plan
 - From \$0.47/MMBtu to \$0.79/MMBtu
 - Magnitude comparable to price swings that occur over a one to two day period

Other Study Issues

- Best Available Retrofit Technology (BART) Rule Considerations
- Transmission Facilities Investment vs. Transmission Service Charges
- Correlating Results from the IRP to the FPSC Filing for TEC
- Recent Capital Cost Adjustment for the TEC project

BART Rule Impacts

- Draft rules issued by FDEP this month.
- Hopkins 1 & 2, Purdom 7 fall under this rule for particulate matter
- Compliance required by 2012
 - Hopkins 1 is only unit affected
 - May require early retirement
- IRP Study did not consider BART rule impacts
 - Early retirement of Hopkins 1 would impact Gas Plan (insufficient capacity)
 - Recent case shows only minor change in plan costs for new capacity addition in 2012

TEC Transmission

- TEC requested transmission interconnection & delivery service from Progress Energy pursuant to FERC tariff requirements
- Studies indicate that plant can be reliably connected to the grid and power delivered by Progress
 - No dedicated transmission facilities needed for the City
 - Progress will construct new facilities near the plant site

TEC Transmission

- Cost of grid improvements will be recovered in transmission service charges paid by the City
 - Transmission charges included in IRP cases and in studies conducted for the FPSC filing
- In TEC's filing under the Power Plant Siting Act, transmission lines to Perry will be certified as a contingency in the event Progress cannot provide service

IRP Results vs. FPSC Filing

- Least cost plan includes TEC
- Plan cost savings not identical
 - Comparison to gas plan in FPSC filing shows savings of \$252 million (NPV) vs. \$55 million in IRP Study
- Plan cost differences caused by several factors. Major contributors are:
 - Different fuel prices
 - CO2 compliance costs in IRP base case

TEC Capital Cost Adjustment

- Overall project capital costs have increased 19%
- Majority of this increase (15%) from market forces, inflation & labor costs
- Project scope changes have also contributed to this cost increase (4%)
- Capital cost sensitivities in the IRP study (and the FPSC filing) were sufficient to capture this cost increase & continue to show the TEC Plan is the least cost plan

Concluding the IRP Study

- Options for the Commission's consideration include:
 - Select one of the four resource plans current under consideration
 - Identify a 5-year resource plan & continue to monitor alternatives
 - Develop a new resource plan/strategy
 - Delay a decision & get more information

The 4 Candidate Plans

| PLAN A | PLAN B | PLAN C | PLAN D |
|---------------------------|---------------------------|--|---------------------------|
| Gas Plan | TEC Plan | IGCC Plan | Coal PPA Plan |
| Hopkins 2 Repowering | Hopkins 2 Repowering | Hopkins 2 Repowering | Hopkins 2 Repowering |
| Demand-Side Management | Demand-Side Management | Demand-Side Management | Demand-Side Management |
| Biomass Purchase | Biomass Purchase | Biomass Purchase | Biomass Purchase |
| Combustion Turbine | Taylor Energy Center | Integrated Gasification Combined Cycle | Coal purchase |

A 5-yr Resource Plan

(2007-2012 Period)

- Hopkins 2 repowering
- Approved DSM portfolio
- Approved renewable energy purchase (BG&E)
- Continued participation in TEC permitting process
- Monitoring and evaluation of resource alternatives & regulatory trends

Develop a New Strategy

- Using results of the IRP Study
- Supplement with additional information and/or other studies
- Revisit strategic objectives
- City Commission policy guidance
- Other