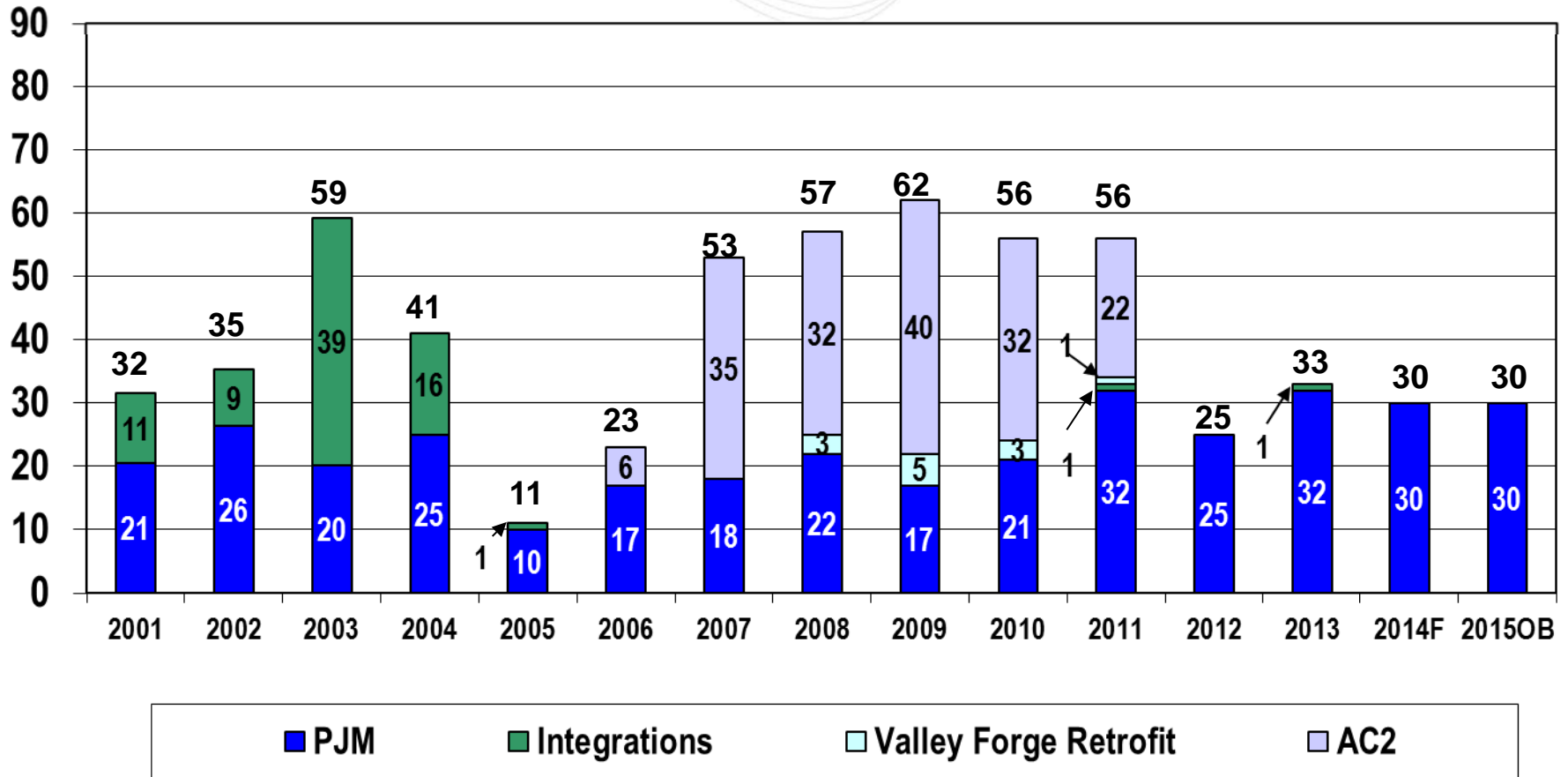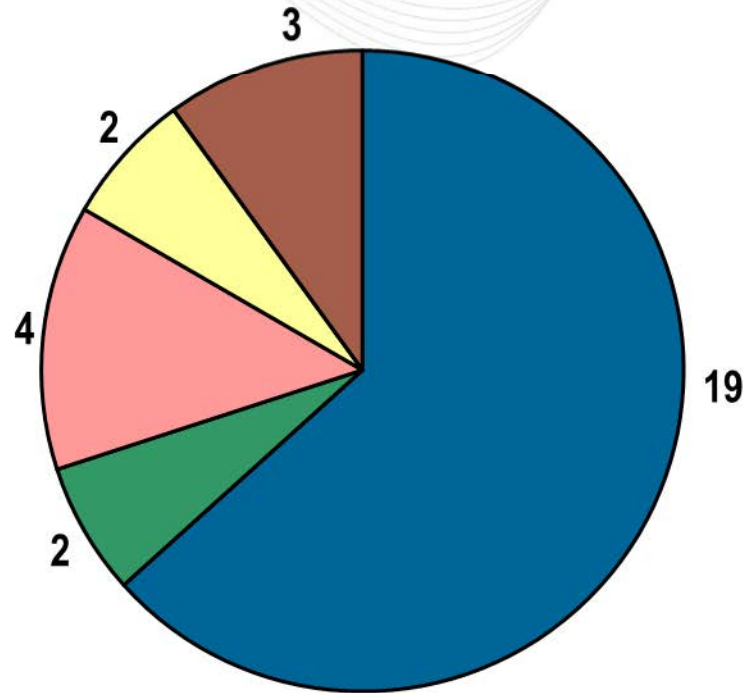# 2015 Preliminary Project Budget

Operating Committee

September 4, 2014

Total = $30 million

- Current Applications & Systems Reliability
- Facilities and Technology Infrastructure
- Application Replacements
- Interregional Coordination
- New Products/Services

(dollars in millions, except rates)	2014	2015
Capital	18	19
Expense	4	5

Critical Infrastructure Protection (CIP) Enhancements – This project will implement a series of enhancements in compliance with NERC standard version 5.

Demand Side Response Enhancements – This project will implement a series of enhancements to the Demand Side Response application to meet the needs of the internal and external customers and address industry shifts.

Legacy Portfolio Migration & Modernization – This project will establish a standard application architecture based on current industry standards and best practices, common frameworks and reusable components for eSuite and third party applications.

Password Vault Implementation – This project will implement an application for managing shared or privileged account passwords. The implementation of this application eliminates hard-coded credentials, provide traceability for security and compliance purposes, and fulfills an implementation commitment to Reliability First.

(dollars in millions, except rates)	2014	2015
Capital	4	4
Expense	1	2

Enterprise Service Bus Replacement – This project will update the current service oriented architecture platform.

Full Packet Capture Refresh – This project will replace the current application monitoring all inbound and out-going information on PJM's corporate internet network.

Video Wall Update – This project will replace the dispatch video wall monitors becoming obsolete with a new, more efficient, reliable and cost-effective solution.

(dollars in millions, except rates)	2014	2015
Capital	5	2
Expense	1	0

<u>Infrastructure Upgrades</u> – This project will purchase network, servers, storage, and telecommunications infrastructure that align with PJM's current architecture as older infrastructure becomes obsolete.

<u>Geographic Information System (GIS) Architecture Upgrade</u> – This project will upgrade the server environment for the system planning geographic information system.

<u>Security Infrastructure Upgrades</u> – This project will purchase and replace security application servers that are obsolete.

(dollars in millions, except rates)	2014	2015
Capital	2	2
Expense	0	0

Market-to-Market Shadow Marketflow Calculator –This project will develop and implement the capability to review the incoming data exchange files from NYISO and MISO. This data will be run through a simulated marketflow calculator to validate the results being used in the market-to-market processes.

Joint Common Market – This project will implement several items requested by MISO and PJM stakeholders. The scope includes freeze date for firm flow entitlement (FFE) calculations interchange pricing, enhancements of pseudo ties and dynamic scheduling, as well as increase use of shadow calculations for MISO.

Market-to-Market Enhancements – This dispatch management tool will be upgraded to perform shadow calculations of firm flow entitlement (FFE) and allocation costs. The scope may include enhanced data exchanges with MISO for FFE and native network load (NNL) and potentially enhancements with real-time exchange with NYISO for additional data.

(dollars in millions, except rates)	2014	2015
Capital	1	3
Expense	1	1

Enhanced Training Simulator Real Time – This project will purchase and develop a real-time training simulator that can work in conjunction with the new Day Ahead simulator to be utilized by market participants and operators.

Dispatch Interactive Map Application – This project will create an application providing better situational awareness for dispatchers. The application will display weather and line outage information on a touch screen interactive geographic map for dispatchers.

Planning Operations Model Sync – This project will create an application to synchronize the planning and operations model providing greater efficiency in model exchange workflows and business process , a higher degree of accuracy in power system studies and simulation, and increased power system reliability and security.

- Demand Side Response FERC Jurisdiction ruling
- NERC Critical Infrastructure Protection (CIP) requirements

Date	Group	Topics
September 4	Operating Committee	• Preliminary 2015 Projects
September 17	Finance Committee	• Proposed 2015 Budget Recommendations
By October 30	Board of Managers	• Consideration of Proposed 2015 Budget