FTR/ARR Funding and Education

FTRSTF

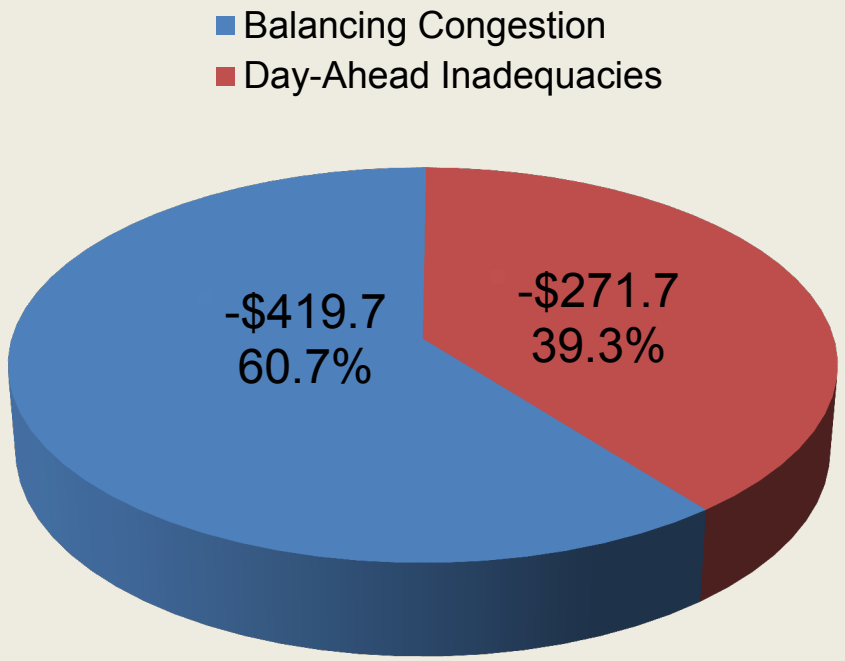
June 25, 2014

FTR Funding History

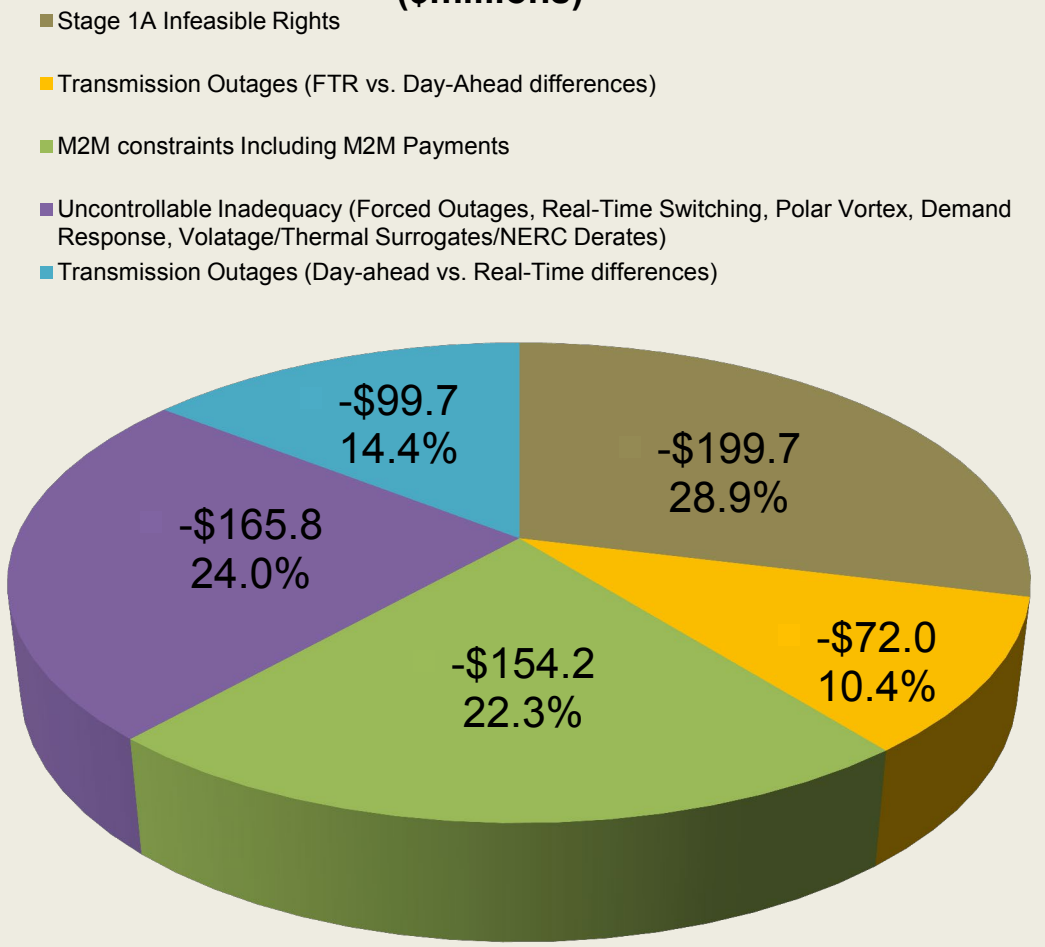
Planning Period	Revenue Adequacy
2007-08	100%
2008-09	100%
2009-10	97%
2010-11	85%
2011-12	81%
2012-13	66%
2013-14	72%

FTR Revenue Inadequacy Causes

2013/2014 Revenue Inadequacy Assignments ($millions)

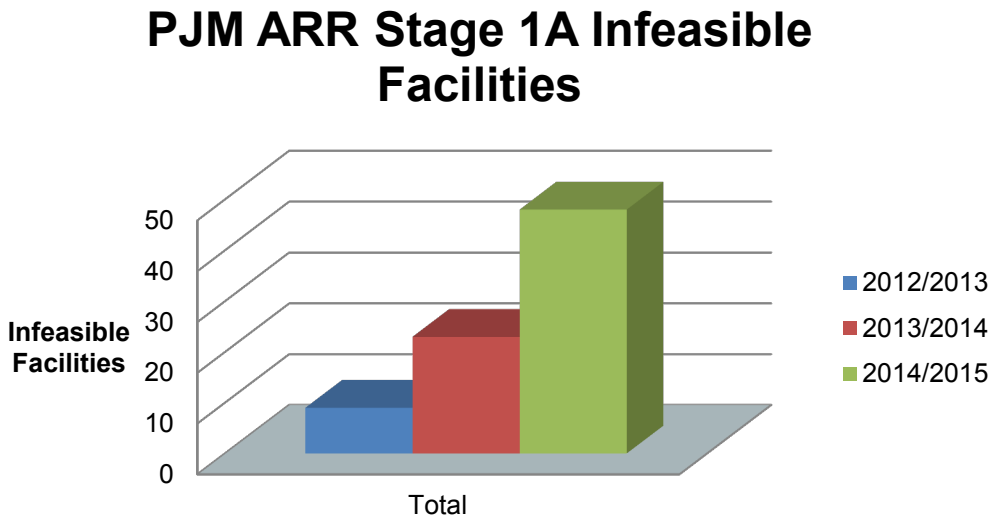


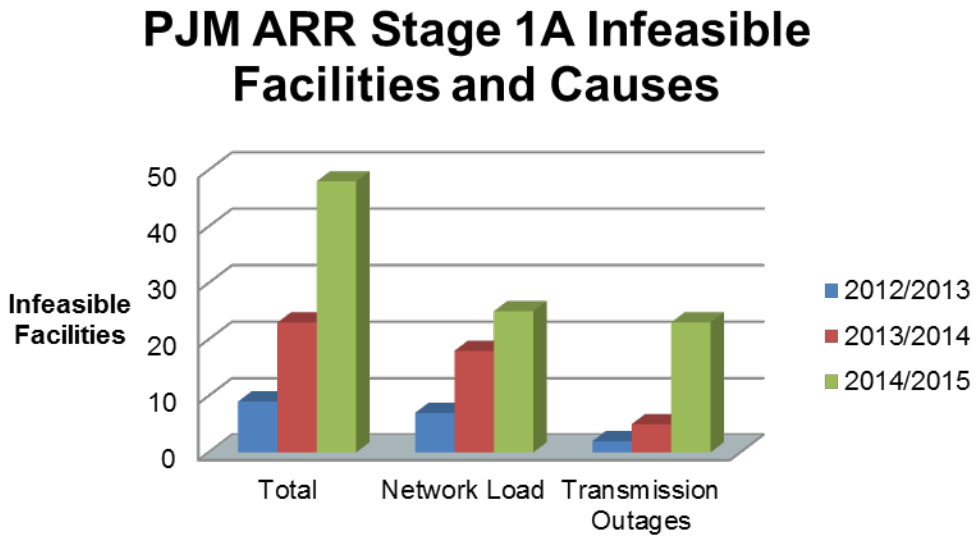
2013/2014 Detailed Revenue Inadequacy Assignments ($millions)



Stage 1A Allocation – Infeasible facilities

- Quantity of Infeasible facilities have increased over last several years
  - Increased Transmission Outages
  - Increased uncompensated power flow (i.e. Loop Flow)
  - Additional M2M Flowgates





Stage 1A Allocation – Inadequacy

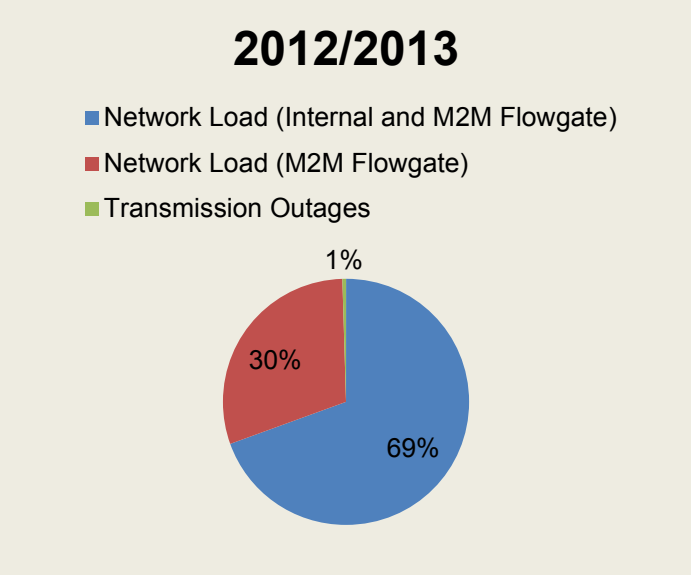
Planning Period	Congestion Credits ($millions)	Total FTR Revenue Inadequacy ($ millions)	FTR Revenue Adequacy %	FTR Revenue Inadequacy from Stage 1A Infeasible ARRs ($ millions)	Stage 1A Infeasible ARRs % of FTR Revenue Inadequacy
2012/2013	$623	$288	68%	$75.3	26%
2013/2014	$1,819	$691	72%	$199.7	29%

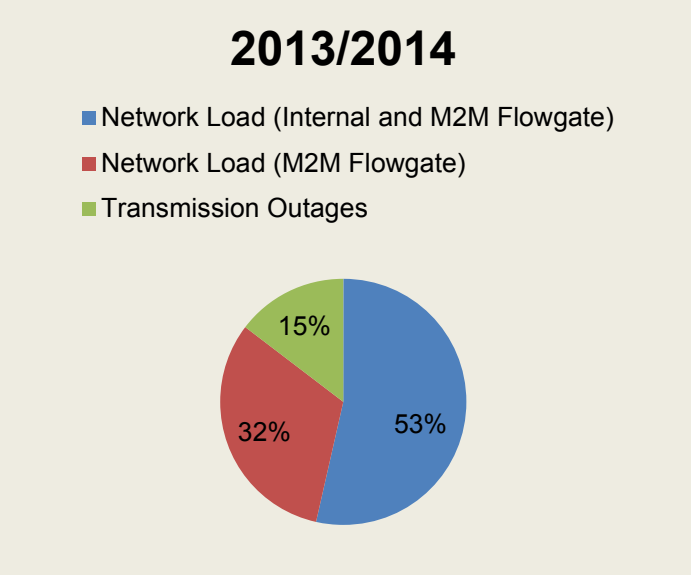
FTR revenue shortfall from Stage 1A infeasible facilities continues to increase

- Inadequacy of Stage 1A ARRs calculated as follows:
  - Value the MWs of infeasible Stage 1A ARRs utilizing the day-ahead congestion prices (MW * (DA Sink LMP – DA Source LMP)*hours in period)
  - Day-ahead congestion LMPs used because the MWs of infeasible ARRs translates into additional FTR MW capability available in FTR auctions as either Self Scheduled FTRs or purchased FTRs.
  - PJM can “buy back” capability on infeasible facilities by utilizing excessive auction revenue but this is difficult and only moves the risk of inadequacy into the FTR auctions as reduced revenues.

Stage 1A Allocation – Inadequacy

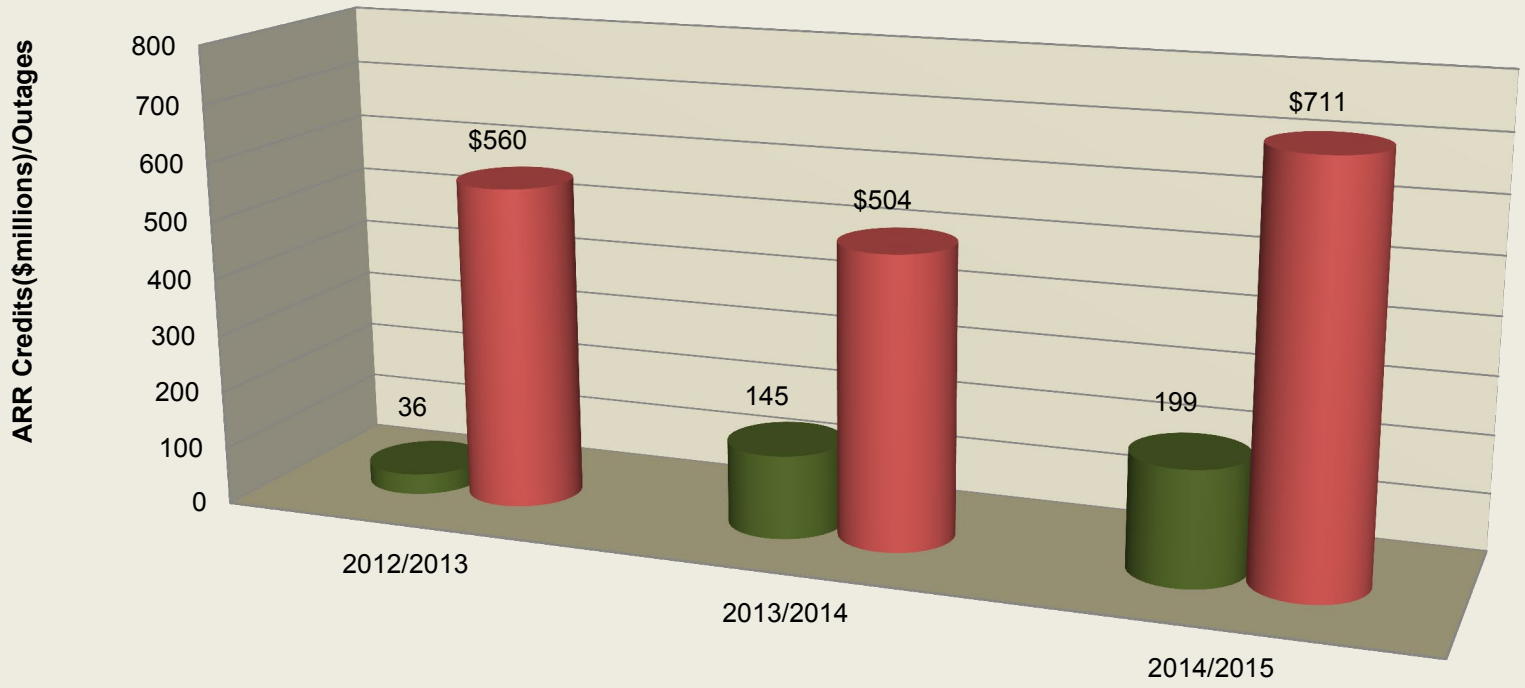
Stage 1A Over allocated Inadequacy Distribution





	2012/2013	2013/2014
Network Load (Internal and M2M Flowgate)	$52.3	$107.0
Network Load (M2M Flowgate)	$22.6	$63.5
Transmission Outages	$0.4	$29.2
Total	$75.3	$199.7

Annual ARR Credits and Modeled Outages

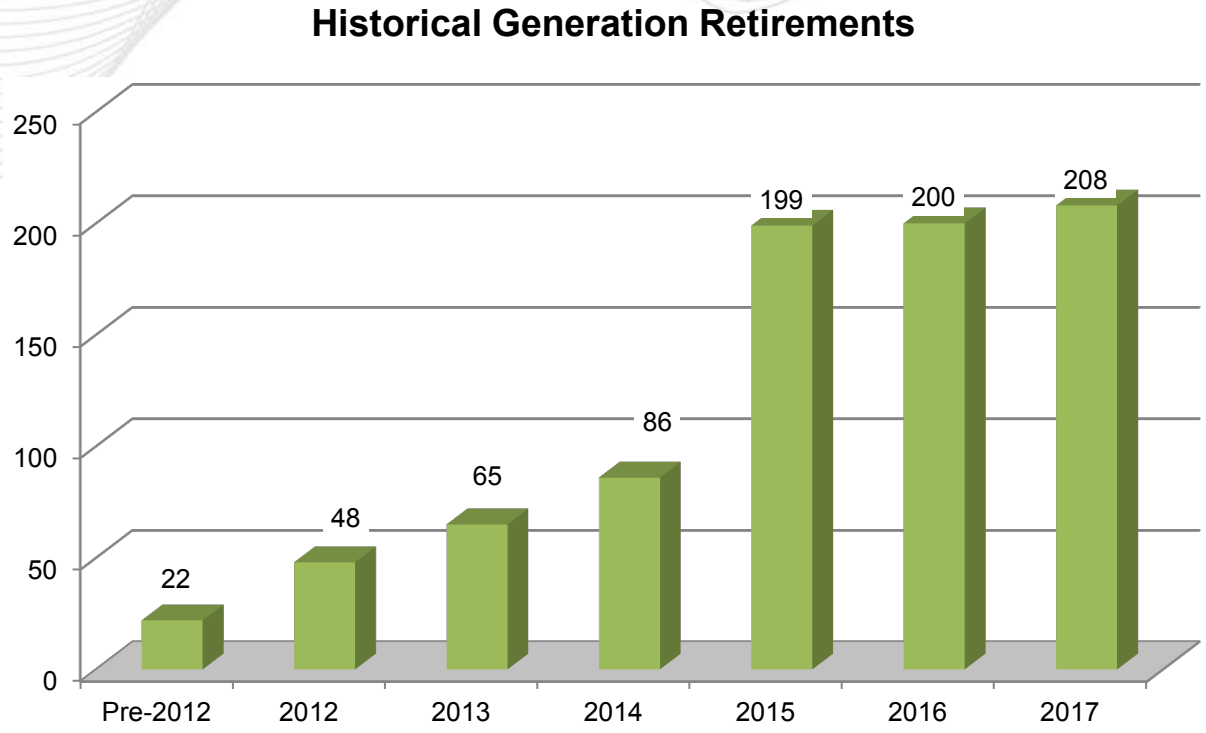


	2012/2013	2013/2014	2014/2015
Annual Outages Modeled	36	145	199
ARR Credits ($ millions)	$560	$504	$711

Stage 1 Allocation – Historical Resources

Generation Retirements

- Requires remapping historical resources to an equivalent generator or creating a dummy generator for ARR/pricing purposes only
  - Idea was to preserve the historical transmission system rights
  - May create additional Stage 1A infeasibilities
- Substantial amount of retirements not expected when Stage 1A process originally designed.



15.4% of Stage 1 historical generation has retired or submitted deactivation notices representing 25,543.7 MWs

Stage 1 Possible Changes

Possible Stage 1 changes

1. Allow proration in Stage 1A
   - Improves FTR funding by removing infeasibilities
   - Improves confidence in FTR values
   - Minimal impact on ARR revenues
     - More constrained ARR/FTR facilities usually increases ARR credits (i.e. 2014/2015 ARR credits higher although less ARRs cleared)
     - Revenue Adequacy should improve and provide confidence to FTR bidders to not devalue bids
   - Stage 1A 10-Year process still exists
2. Remove Stage 1 historical resources when they physically retire
   - Units do not exist so transmission system rights from generator not necessary
   - Should reduce stage 1A infeasibilities
   - Creates correct model