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"If I got to choose a coast, I got to choose the East. I live out there, so don't go there": An Overview of the PADD 1 Fuel Oil Market

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Axelrod Energy Projects, LLC

World Fuel Oil Summit VII

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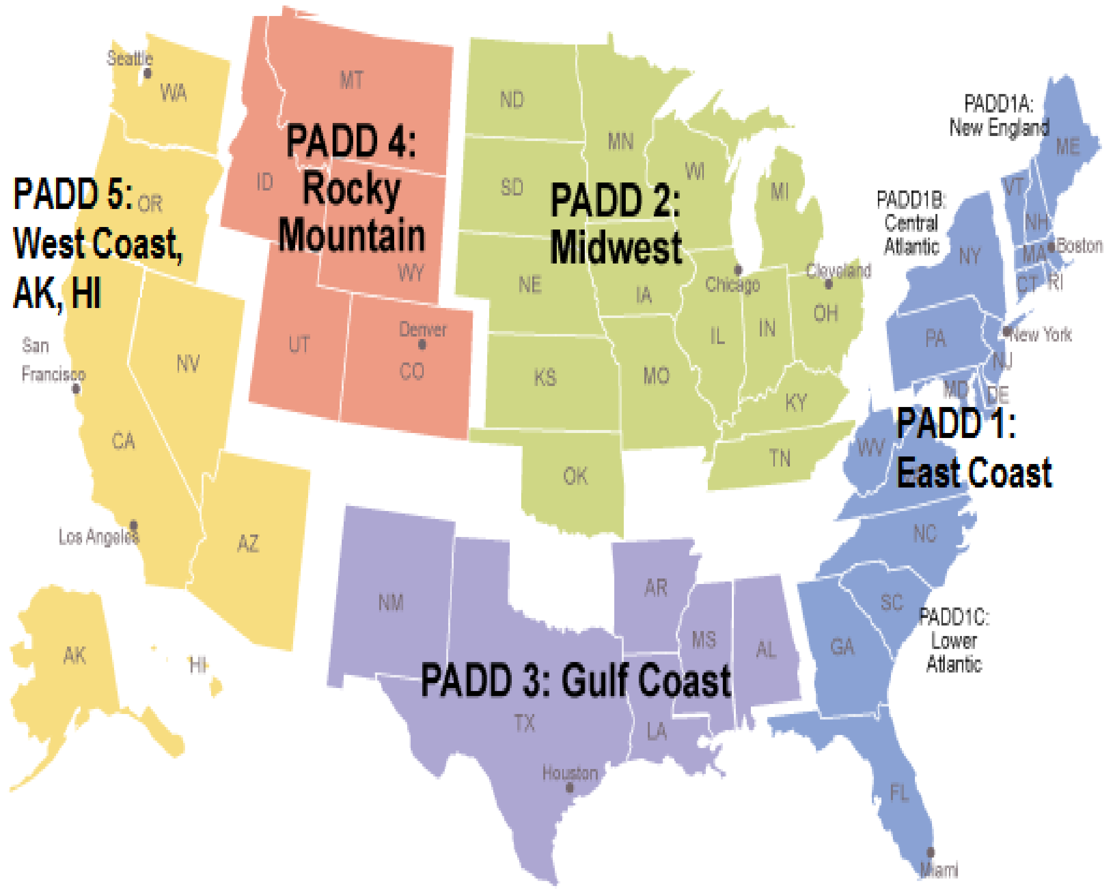
What is a PADD?



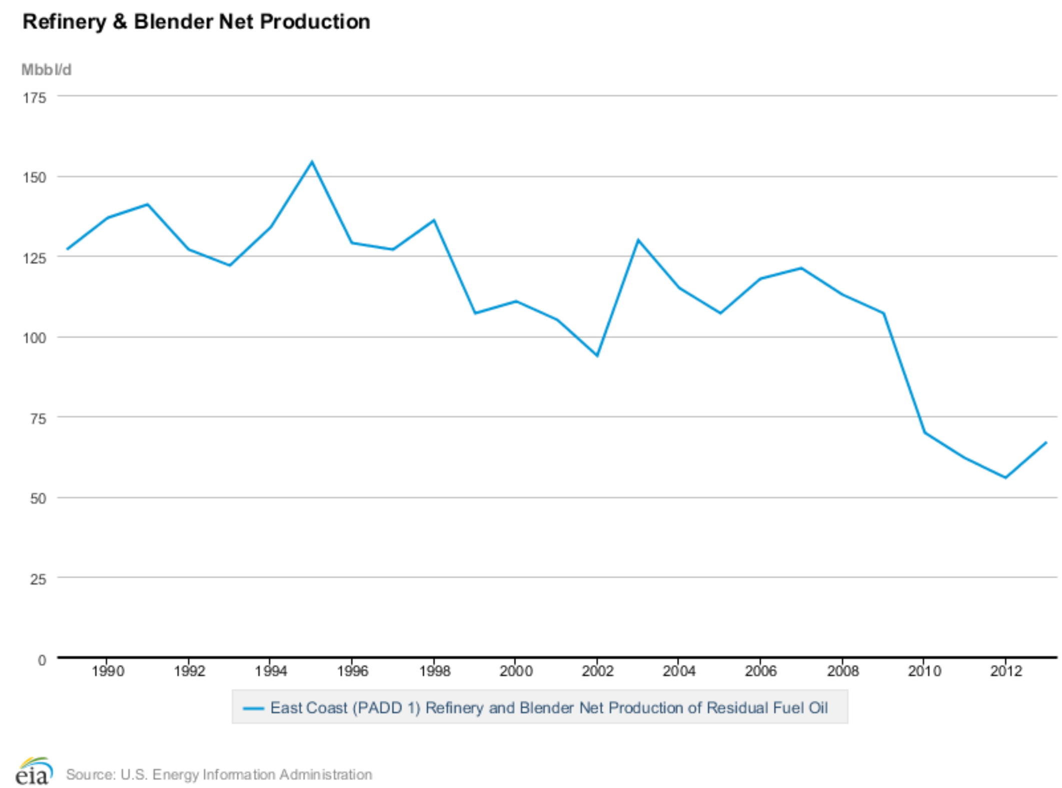
Source: U.S. Energy Information Administration

Introduction

- Supply
  - Production by refinery (PES, P66, Monroe, PBF)
  - Imports (HSFO, LSFO, HSSR, LSSR)
- Demand
  - Local outlets (Bunker, Utility, Residential/Commercial)
  - Exports (LSFO)

Supply

- 5 refineries
- 1.2 million b/d refining capacity
- Fuel oil production of 73 kb/d



Refining

- PBF
- PES
- Monroe
- P66

Refiner Profile

PBF

- Delaware City, DE 190 kb/d
  - Heavy sour crudes from Canada, LatAm and AG
  - Negligible FO

- Paulsboro, NJ 185 kb/d
  - Heavy sour crudes from Canada, LatAm and AG
  - 5 kb/d high sulfur, negative API slurry
  - 50 kb lots

Refiner Profile

PES

- Philadelphia, PA 335 kb/d
  - Light-sweet almost entirely domestic crude
  - 20-25 kb/d 0.3-0.4%S
  - Main outlets are Puerto Rico and USAC utility/residential/commercial markets.
  - Exports in 350 kb lots

Refiner Profile

Monroe

- Trainer, PA 185 kb/d
  - Light-sweet mostly domestic and WAF crudes
  - 15 kb/d 0.6%S VTB/Slurry generally marketed as segregated products in 50 kb lots
  - VTBs can go into bunker market
  - High metals slurry mostly goes to local utilities and can be bled into bunkers

Refiner Profile

P66

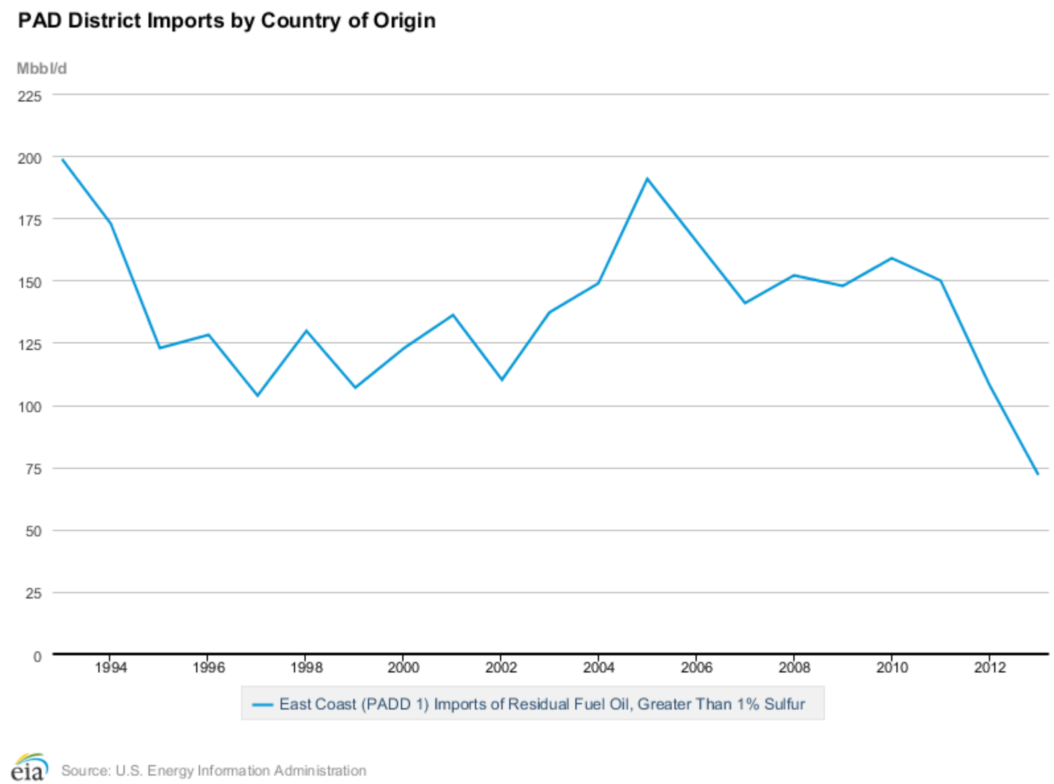
- Bayway, NJ 238 kb/d
  - Light-Sweet primarily domestic crude
  - 20-25 kb/d, 1%S
  - Mostly stays local for bunkers. Occasionally is exported.

Imports

- HSFO
- LSFO
- HSSR
- LSSR

HSFO

- Key HSFO Sources
  - Canada
  - Colombia
  - Trinidad

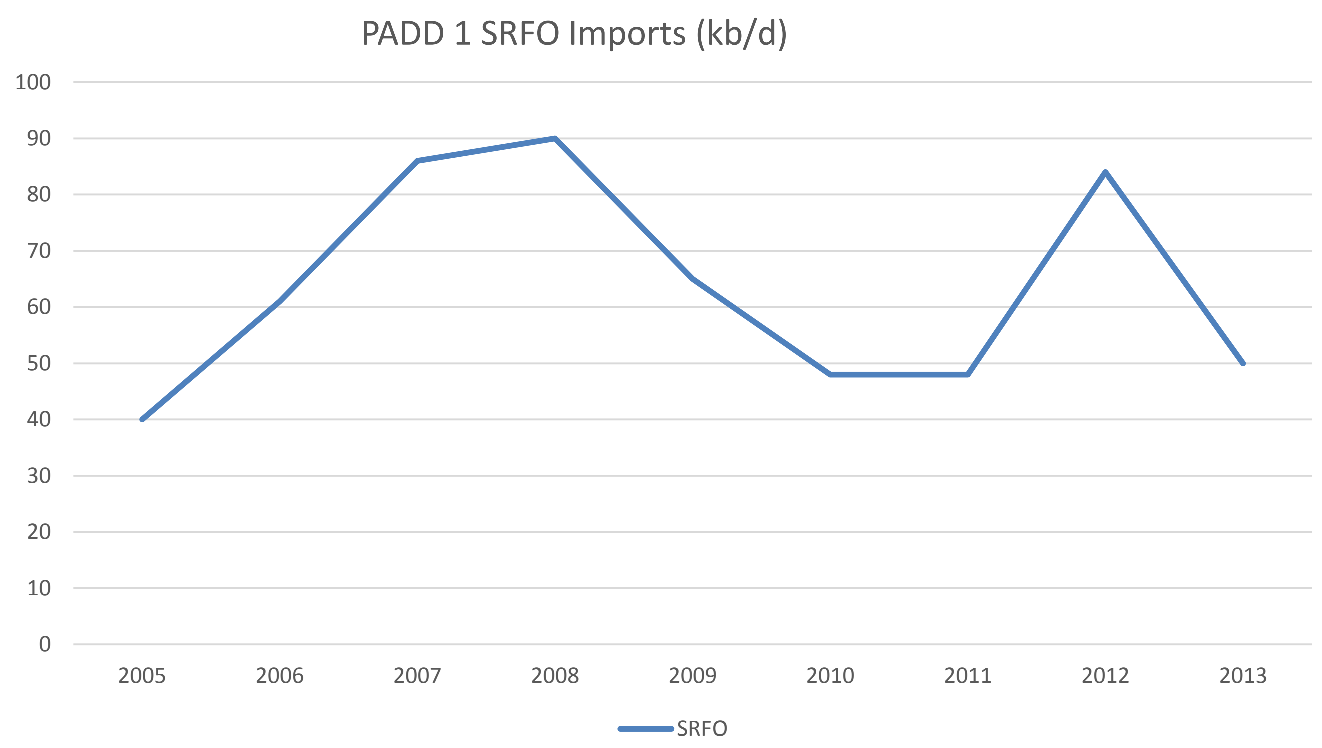


LSFO

- Cracked imports of 1%S
  - Generally for the bunker market

- <0.5%S
  - For utility and residential/commercial blending

SRFO


PADD 1 SRFO Imports (kb/d)
100
90
80
70
60
50
40
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
SRFO

HSSR

- PBF only importer
  - On average roughly 30 kb/d is consumed, almost all at Del City
  - Mostly Baltic M100
  - Demand can vary widely
  - Statoil supplies Crude and heavy feedstock into Del City until the end of 2015

LSSR

- P66 only cargo importer for processing.
  - Run roughly 25 kb/d of WAF and NAF material
- During winter imports needed for utility and NYC market

Demand

- Bunker
- Utility
- NYC

Estimated Bunker Demand

Bunker Market	Monthly Demand (kt)
Portland, Boston, Providence	40
New York Harbor	200
Philadelphia	60
Baltimore, Norfolk, Charleston, Savannah	160
East Coast Florida	130
Total	**590 (of which 180 is LSFO)**

Bunker

- Key suppliers: Chemoil, Aegean, P66, Shell, BP, Global, Transmontaigne, and Vitol.
- Reflecting lack of local HSFO production, majority of supply for bunkers must be imported.
- 125 kb/d demand, 2/3 is imported

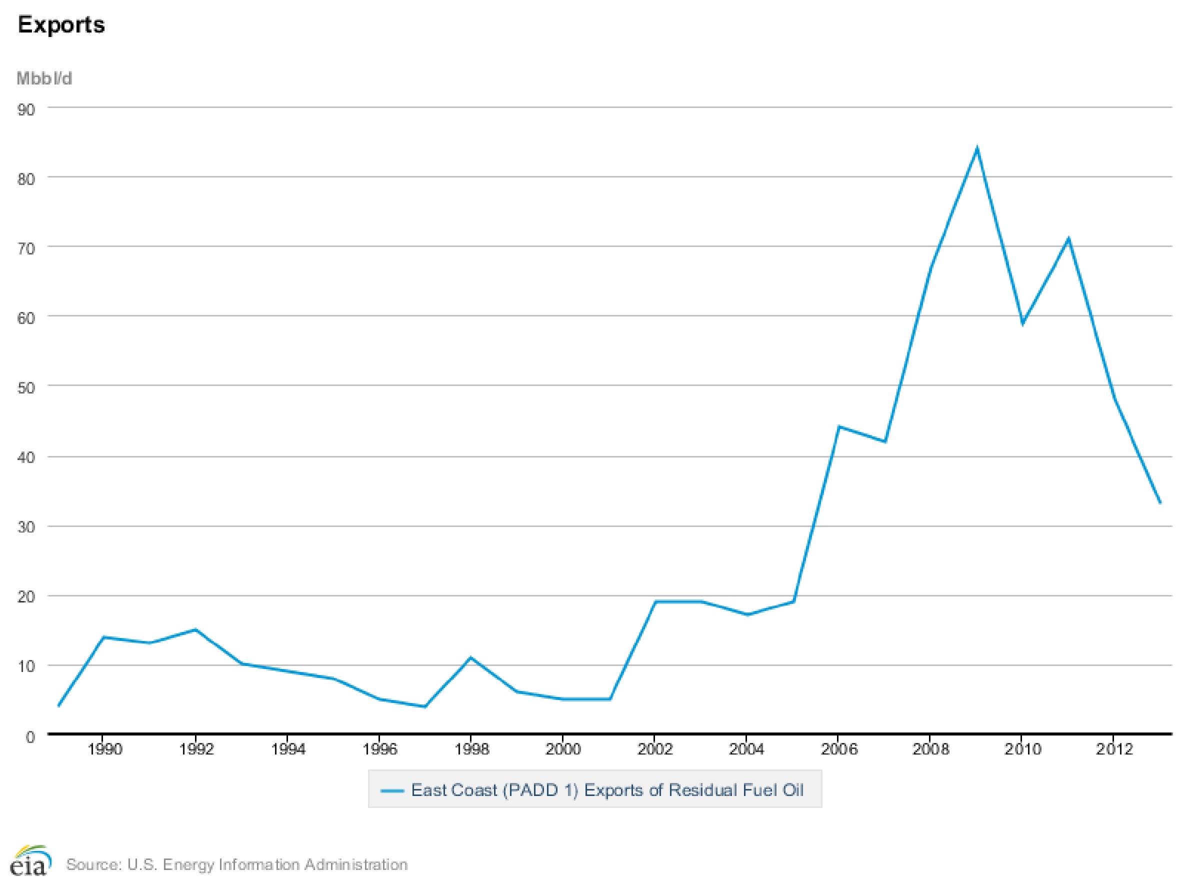
Utility

- Characteristics of the market
  - Utilities sprinkled up and down the northeast.
  - Est. 25 kb/d demand.
  - Peaks in winters, some bump in summer. Spring/fall almost nil
  - Bottomed out?

City-Spec

- NYC 0.3%S LP Market
  - July 2015 NYC buildings will no longer be allowed to burn No. 6 oil.
  - Over 200 kt of annualized demand will disappear between 2014 and May 31, 2015.
  - 300 kt of fuel oil demand per year will continue to exist for No 4. oil blending.

Exports

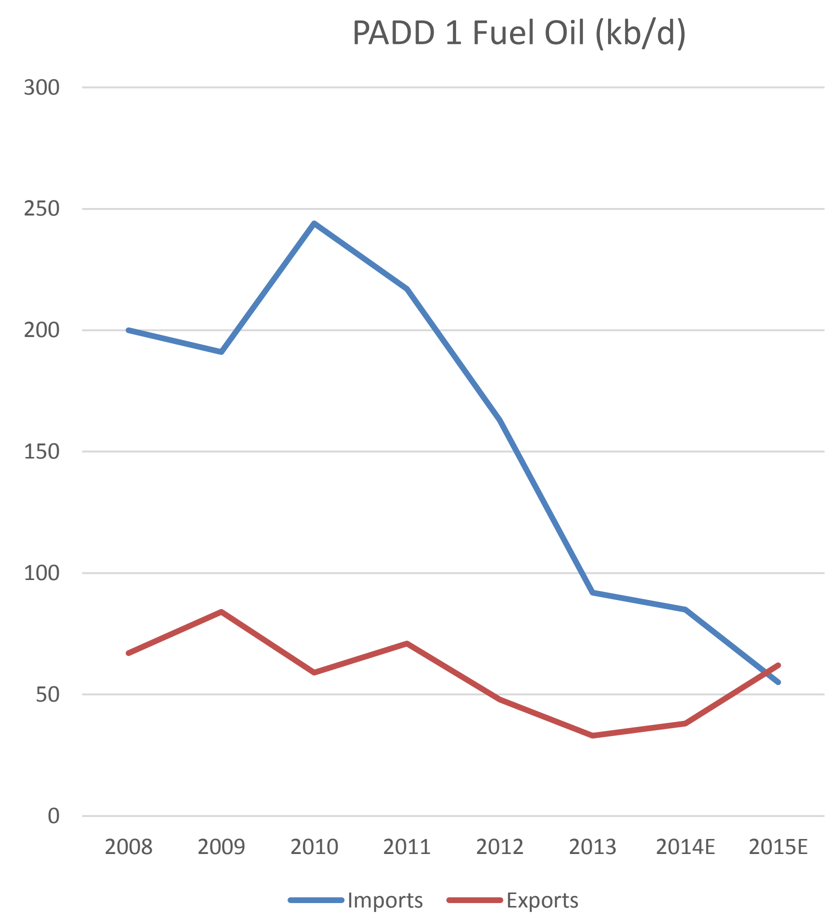

Exports
Mbbl/d
90
80
70
60
50
40
30
20
10
0
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
East Coast (PADD 1) Exports of Residual Fuel Oil
eia
Source: U.S. Energy Information Administration

Conclusion

- HSSR
  - More Canadian?
  - Russian upgrading?
- LSSR
  - Increased demand to counterbalance domestic crudes?

Conclusion Ctd.

- Changing Balances in 2015
  - Imports down 37 kb/d + Exports up 20-25 kb/d = 65 kb/d swing
  - Our expectation is that exports of cracked fuel oil will overtake imports of cracked fuel oil for the first time in the last 30 years.



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