❖

Western Refining Company, LP
Margaret Ghalayini
Product Trader

Manage RIN obligation by buying and selling renewable energy credits to ensure compliance with the RENEWABLE FUEL STANDARD (RFS)

created by the EPA to mandate the use of RENEWABLE FUELS (RF).

A RIN (Renewable Identification Number)

K YYYY CCCC FFFFF BBBBB RR D SSSSSSSS-EEEEEEEE
(Tracks Production, Use, Compliance)

K (either a 1 or 2)	Assigned/Separated RIN
YYYY	Year of Production/Import
CCCC	Company ID
FFFFF	Facility ID
BBBBB	Batch Number
RR	Equivalence value
D (3,4,5,6,7)	RF Category
SSSSSSSS	Start of RIN block
EEEEEEEE	End of RIN block

RIN LIFE PRODUCTION-RETIREMENT

K1 ASSIGNED RIN

1) RINS are generated and assigned at production or import point for each gallon of RF
2) RINS transfer with volume of RF to buyer (transferred via PTD)
3) Assigned RINS cannot be sold independent from fuel (limited fungibility)

K2 SEPARATED RIN

1) Only certain parties may separate
   1) Gas and Dsl refiners and importers **(OBLIGATED PARTY)**
   2) RF owners at the point of blending in the fossil fuel **(NON OBLIGATED)**
2) Once separate can be traded independently from fuel
3) Separated RINS are “retired” to EPA for compliance

Energy Policy Act 2005 (RFS1)

- 7.5 billion gallons of RF to be blended into gasoline by 2012
- One RIN type with corn ethanol as the RF

Average RIN Price

> 1 cent per gallon

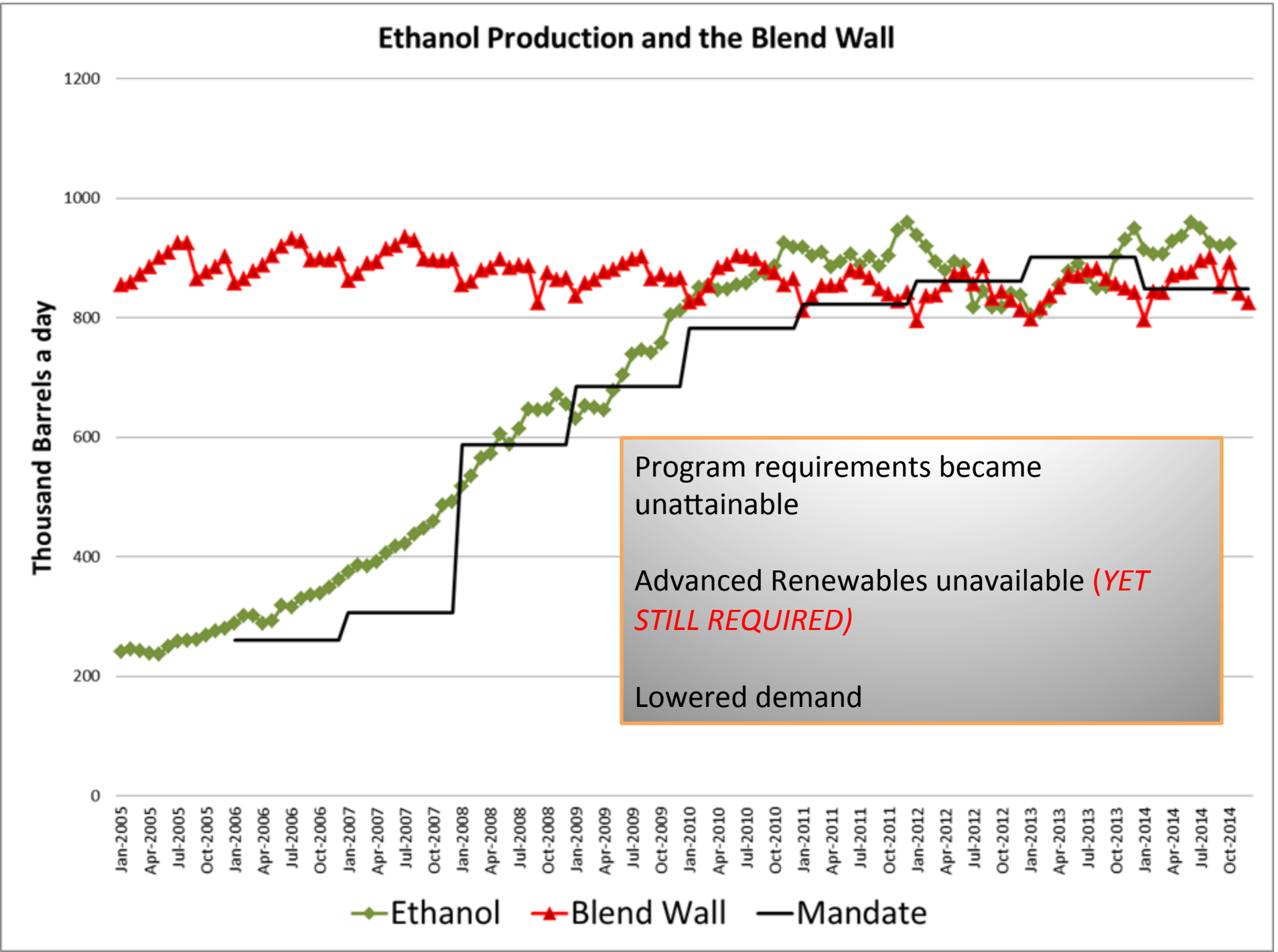
1 RIN = 1 GALLON

Energy Independence and Security Act 2007 (RFS 2)

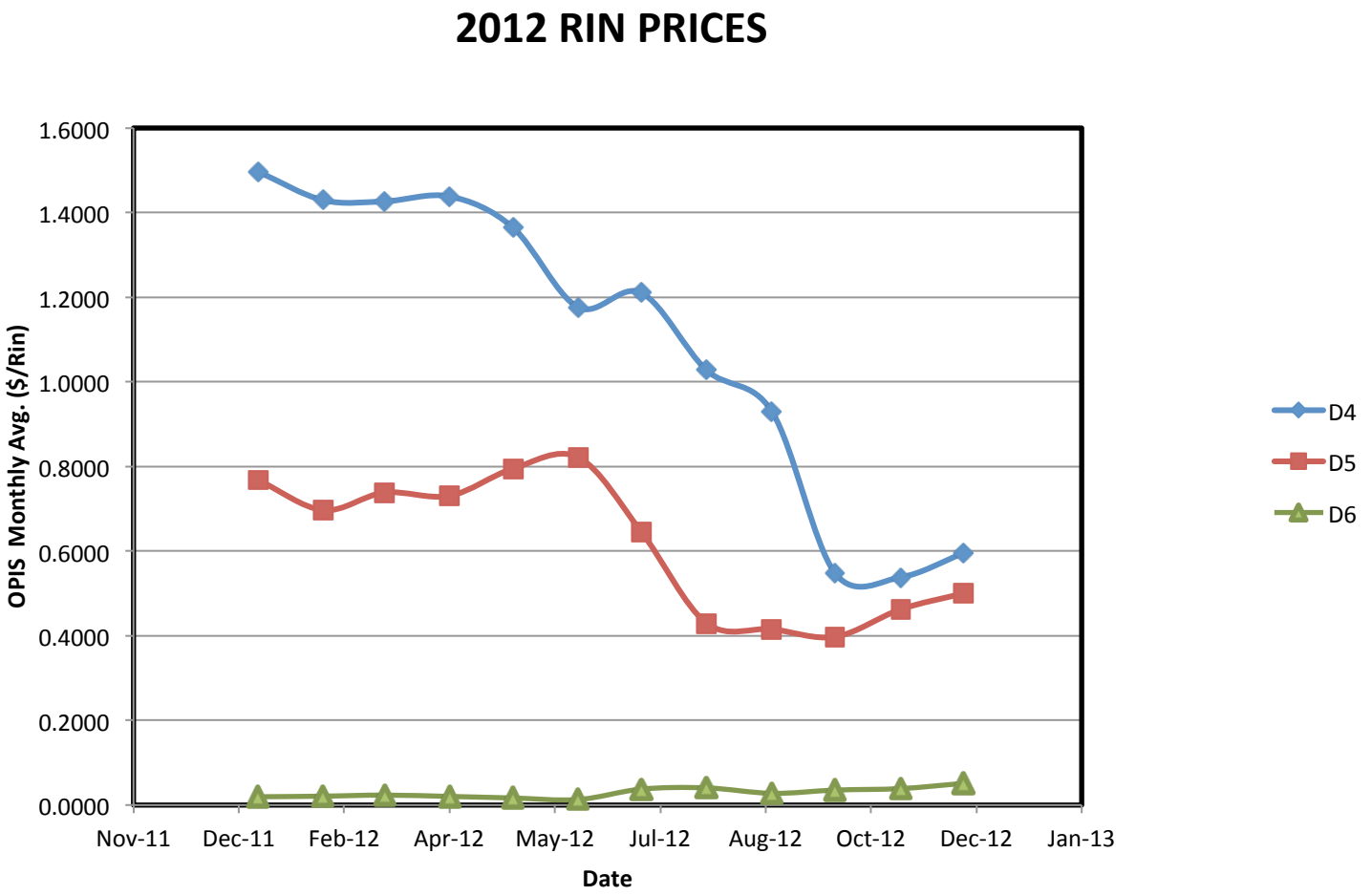
D Code	Fuel Type	Fuel	GHG Reduction Requirement
D3	Cellulosic Biofuels	Cellulosic ethanol, naphtha	**60%**
D4	Bio-mass based Diesel	Biodiesel, renewable diesel	**50%**
D5	Advanced Renewables	Sugarcane ethanol, renewable heating oil, Biogas	**50%**
D6	Renewable Fuel	Corn ethanol	**20%**
D7	Cellulosic Diesel	Cellulosic diesel	**60%**

Renewable Fuel Volume Requirements for RFS2 (billion gallons)

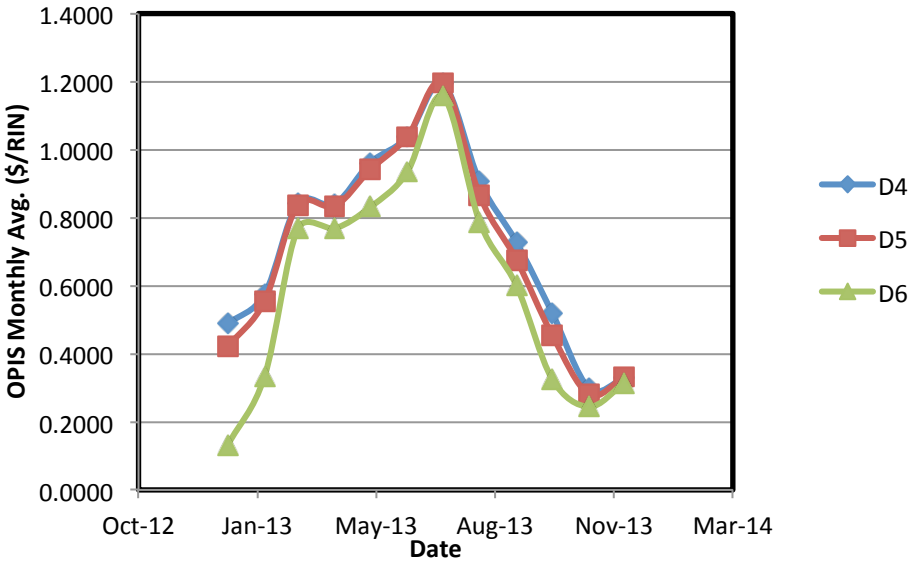
Year	Cellulosic biofuel (D3/D7)	Biomass-based diesel (D4)	Advanced biofuel (D5)	Renewable Fuel (D6)	Sum
2011	n/a	0.8	1.35	12.6	13.95
2012	.00865	1	2	13.2	15.2
2013	tbd	1.28	2.75	13.8	16.55
2014	tbd	tbd	3.75	14.4	18.15
2015	tbd	tbd	5.5	15	20.5
2016	tbd	tbd	7.25	15	22.25
2017	tbd	tbd	9	15	24
2018	tbd	tbd	11	15	26
2019	tbd	tbd	13	15	28
2020	tbd	tbd	15	15	30
2021	tbd	tbd	18	15	33
2022	tbd	tbd	21	15	**36**


Ethanol Production and the Blend Wall
Thousand Barrels a day
1200
1000
800
600
400
200
0
Jan-2005
Apr-2005
Jul-2005
Oct-2005
Jan-2006
Apr-2006
Jul-2006
Oct-2006
Jan-2007
Apr-2007
Jul-2007
Oct-2007
Jan-2008
Apr-2008
Jul-2008
Oct-2008
Jan-2009
Apr-2009
Jul-2009
Oct-2009
Jan-2010
Apr-2010
Jul-2010
Oct-2010
Jan-2011
Apr-2011
Jul-2011
Oct-2011
Jan-2012
Apr-2012
Jul-2012
Oct-2012
Jan-2013
Apr-2013
Jul-2013
Oct-2013
Jan-2014
Apr-2014
Jul-2014
Oct-2014
Program requirements became unattainable
Advanced Renewables unavailable (YET STILL REQUIRED)
Lowered demand
Ethanol
Blend Wall
Mandate

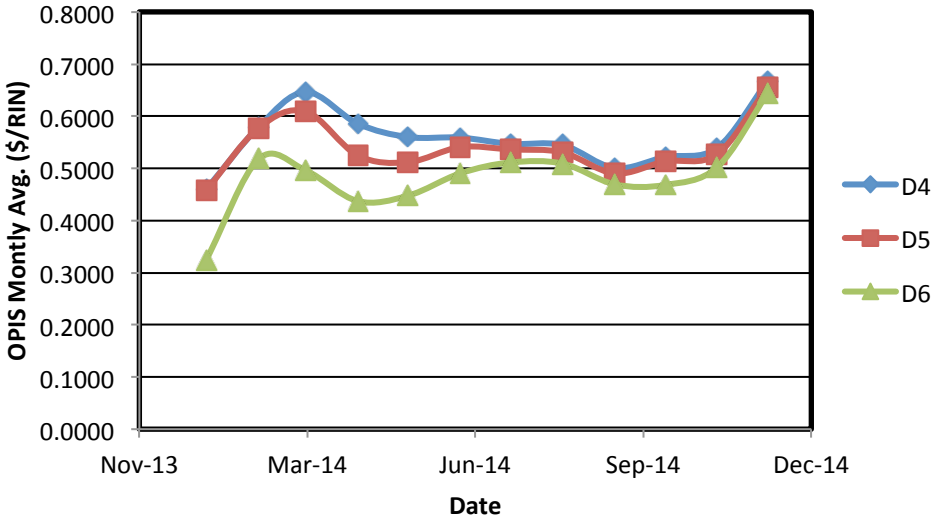
RIN PRICES UNDER RFS2



2013 RIN PRICES



2014 RIN PRICES



BLEND MARGIN CALCULATION

Gasoline with ethanol

CBOB	2.00
Ethanol	1.50
D6 RIN	.70

-receive 1 D6 RIN with each gallon of ethanol

(2.00*.90)+(1.50*.10)=1.95

To factor in RIN:
(.70*.10)= .07 cpg savings

1.95-.07= 1.88 FINAL COST
12 cpg final savings

Diesel with B100

ULSD	2.00
B100	3.00
D4 RIN	1.00

-receive 1.5 D4 RIN with each gallon of B100

(2.00*.95)+(3.00*.05)=2.05

To factor in RIN:
(1.00*1.5)=1.50
(1.50*.05)=.075 cpg savings

2.05-.075=1.985 FINAL COST
1.5 cpg final savings