Optimizer Input Title

GSS Optimizer Data Input Field Flow - Daily/Monthly - Available for Sale & Imbalance Data

Data for 10 fields is sequential from left to right beginning with field #1

If an alternate input is available for field, it is displayed sequentially below the same field #

AFS Title

Available for Sale Process

1 - Estimated Residue

1 Estimated Residue

Data Input Method
- Manual entry - also uses other calculated data sources

How is data determined?
- Based on plant performance over a 5-day period
- Determine what the plant will do the following day

Where does data come from?
- Dusty uses a dashboard in an app called "**Seek**"
- Optimizers (Davide) use a "PI" dashboard to locate average residue per tailgate

2020 Automation Enhancement Opportunity
- Determine best way to create a PI dashboard
- Decide on what to automate in the future
- Find out how each Optimizers does it
- Base data on a 5-day average
- Base Take in Kind plus or minus

Start

2 - Take in Kind

2 Take in Kind

Data Input Method
- Manual entry

How is data determined?
- Take in Kind (TIK) is contractual – a percentage is equity
  and a percentage is Take in Kind
- Rely on TIK customer to determine these percentages
- DCP takes customer's word for the percentages reported

Where does data come from?
- Aligne
- Optimizers go to Aligne every morning to get TIK numbers
  for the DAY BEFORE
- Nominations may not be available yet because numbers

2020 Automation Enhancement Opportunity
- Remove a 'best guess' for TIK numbers and

Next

3 - Shrink (or Industrials)

3 Shrink

Data Input Method
- Manual entry

How is data determined?
- Do not use SHRINK if a plant is too small
- If too small, instead use the sum of Shrink and Industrials
  if available
- All data input fields for Shrink can be labeled "Shrink" even if Industrials are used.
- This number will be determined by the Optimizers

Where does data come from?
- What a plant loses when processing gas

Next

4 - Booster Fuel

4 Booster Fuel

Data Input Method
- Manual entry

How is data determined?
- Booster fuel is the sum of EBB measurement volumes from
  boosters

Where does data come from?
- EBB measurement volumes scraped from plant websites
  by RPA bots
- Optimizers manually obtain volume measurement data

2020 Automation Enhancement Opportunity
- Automatically populate the Booster Fuel data in GSS
- Pull in Noms vs Measured Volumes

Next

5 - Available for Sale (0)

5 Available for Sale
No gas is available for sale

Data Input Method
- Auto-calculated

How is data determined?
- AFS is automatically calculated
- May be a negative AFS number primarily for the
  Shrink Account
- AFS is calculated by taking the Estimated Residue amount,
  MINUS the SUM of the data for Take in Kind, Shrink, and
  Booster Fuel

Where does data come from?
- An automatic calculation using data manually input for
  Estimated Residue, Take in Kind, Shrink and

Next

5 - Available for Sale +

5 Available for Sale
This gas amount is available for sale

Data Input Method
- Auto-calculated

How is data determined?
- AFS is automatically calculated
- May be a negative AFS number primarily for the
  Shrink Account
- AFS is calculated by taking the Estimated Residue amount,
  MINUS the SUM of the data for Take in Kind, Shrink, and
  Booster Fuel

Where does data come from?
- An automatic calculation using data manually input for
  Estimated Residue, Take in Kind, Shrink and

Next

5 - Available for Sale - (for shrink acct)

5 - Available for Sale
Negative AFS for SHRINK Acct. ONL

Data Input Method
- Auto-calculated

How is data determined?
- AFS is automatically calculated
- May be a negative AFS number primarily for the
  Shrink Account
- AFS is calculated by taking the Estimated Residue amount,
  MINUS the SUM of the data for Take in Kind, Shrink, and
  Booster Fuel

Where does data come from?
- An automatic calculation using data manually input for
  Estimated Residue, Take in Kind, Shrink and

Next

6 - Base Load & Term

6 Base Load & Term

Data Input Method
- Manual entry

How is data determined?
- By Downstream Schedulers and Marketing Traders
- Base Load & Term number NEVER changes

Where does data come from?
- Downstream schedulers and Marketing Traders provide
  Base Load & Term plant numbers to Optimizers using any
  of these manual methods:
  - Excel spreadsheets
  - Email containing these numbers sent to Optimizers
  - Use of a chat box or instant messenger

2020 Automation Enhancement Opportunity
- Auto-populate Base Load & Term data into GSS

Next

7 - Buy / Sell (0)

7 Buy / Sell
Gas does not need to be bought or s

Data Input Method
- Auto-calculated

How is data determined?
- Available for Sale number – **MINUS**, Base Load & Term,
  equal a Buy or a Sell value

Where does data come from?
- A calculation from AFS and Base Load & Term numbers

Next

7 - SELL +

7 Sell
Gas surplus - Gas must be sold

Data Input Method
- Auto-calculated

How is data determined?
- Available for Sale number – **MINUS,** Base Load & Term,
  equal a Buy or a Sell value

Where does data come from?
- A calculation from AFS and Base Load & Term numbers
- If more gas is produced than contractually forecasted,
  there is a **surplus**
- Gas must be **sold** (+ Sell) to correct the imbalance
- Sell data field is auto-calculated

Next

7 - Buy -

7 - Buy
Gas deficit- Gas must be purchased

Data Input Method
- Auto-calculated

How is data determined?
- Available for Sale number – **MINUS**, Base Load & Term,
  equal a Buy or a Sell value

Where does data come from?
- A calculation from AFS and Base Load & Term numbers
- If less gas is produced than contractually forecasted,
  there is a **deficit**
- Gas must be **purchased** (- Buy) to correct the imbalance
- Buy data field is auto-calculated

Next

Imbalance Title

Imbalance Data

8 - FOM Imbal +

8 FOM Imbal
First of Month Imbalance

Data Input Method
- Manual entry

How is data determined?
- Optimizer must physically research the plant's EBB
  website to locate this number
- Optimizer knows their contract work and enters this
  number accordingly
- Optimizer enters FOM value manually on a daily basis
- Manual entry allows FOM value to be preserved in the
  calculations submitted for the daily AFS numbers

Where does data come from?
- FOM (first of month) Imbal (imbalance) is obtained
  manually from the plant's EBB website
- This number is **NOT** scraped by the bots and does

Next

8 - FOM Imbal –

8 - FOM Imbal
Negative First of Month Imbalance

Data Input Method
- Manual entry

How is data determined?
- Optimizer must physically research the plant's EBB
  website to locate this number
- Optimizer knows their contract work and enters this
  number accordingly
- Optimizer enters FOM value manually on a daily basis
- Manual entry allows FOM value to be preserved in the
  calculations submitted for the daily AFS numbers

Where does data come from?
- FOM (first of month) Imbal (imbalance) is obtained
  manually from the plant's EBB website
- This number is **NOT** scraped by the bots and does

Next

9 - CurrMO Imbal - Dynamic from PowerBI

9 CurrMo Imbal
Current Monthly Imbalance

Data Input Method
- Auto-populated by database with manual entry (override allowed)

How is data determined?
- Data is scraped from a plant's EBB website by RPA bots –
  daily at 10:00pm
- CurrMo Imbal data is stored in a JSON file and consumed
  by a database – daily at 5:00am MST
- CurrMo Imbal value is automatically populated in these
  areas – daily at 5:30am:
  - **CurrMo Imbal field in the GSS application**
  - Power BI GSS Dashboard for each region/plant

Where does data come from?
- EBB 3rd party websites - RPA bots scrape imbalance data
- CurrMo Imbal is automatically populated in the GSS
- Optimizers can also obtain this data from the GSS
  Dashboard in Power BI and enter it manually
- Optimizers can manually edit auto-populated if incorrect

Next

9 - CurrMO Imbal - Negative

9 - CurrMo Imbal
Negative Current Monthly Imbalance

Data Input Method
- Auto-populated by database with manual entry (override allowed)

How is data determined?
- Data is scraped from a plant's EBB website by RPA bots –
  daily at 10:00pm
- CurrMo Imbal data is stored in a JSON file and consumed
  by a database – daily at 5:00am MST
- CurrMo Imbal value is automatically populated in these
  areas – daily at 5:30am:
  - **CurrMo Imbal field in the GSS application**
  - Power BI GSS Dashboard for each region/plant

Where does data come from?
- EBB 3rd party websites - RPA bots scrape imbalance data
- CurrMo Imbal is automatically populated in the GSS
- Optimizers can also obtain this data from the GSS
  Dashboard in Power BI and enter it manually
- Optimizers can manually edit auto-populated if incorrect

Next

9 - CurrMO Imbal - Modified

9 CurrMo Imbal - Edite
Edited Current Monthly Imbalance

Data Input Method
- Auto-populated by database

How is data determined?
- Data is scraped from a plant's EBB website by RPA bots –
  daily at 10:00pm
- CurrMo Imbal data is stored in a JSON file and consumed
  by a database – daily at 5:00am MST
- CurrMo Imbal value is automatically populated in these
  areas – daily at 5:30am:
  - **CurrMo Imbal field in the GSS application**
  - Power BI GSS Dashboard for each region/plant

Where does data come from?
- EBB 3rd party websites - RPA bots scrape imbalance data
- CurrMo Imbal is automatically populated in the GSS
- Optimizers can also obtain this data from the GSS
  Dashboard in Power BI and enter it manually
- Optimizers can manually edit auto-populated if incorrect

Next

10 - CUM Imbal - Total FOM Imbal and CurrMo Imbal

10 CUM Imbal
Cumulative Imbalance

Data Input Method
- Auto-calculated

How is data determined?
- Cumlative Imbalance (CUM Imbal) is the sum of First of
  Month Imbalance (FOM Imbal) **PLUS** the Current Monthly
  Imbalance (CurrMO Imbal)

Where does data come from?
- CUM Imbal is automatically calculated in GSS
- Current Monthly Imbalance data automatically populated
  in GSS is part of the CUM Imbal calculation
- First of Month Imbalance data is also used in the
  calculation to decide the CUM Imbal
- The FOM Imbal number is never automated and is entered

GSS Values Complete

Next

10 - CUM Imbal - negative -Total FOM Imbal and CurrMo Imbal

10 - CUM Imbal
Negative Cumulative Imbalance

Data Input Method
- Auto-calculated

How is data determined?
- Cumlative Imbalance (CUM Imbal) is the sum of First of
  Month Imbalance (FOM Imbal) **PLUS** the Current Monthly
  Imbalance (CurrMO Imbal)

Where does data come from?
- CUM Imbal is automatically calculated in GSS
- Current Monthly Imbalance data automatically populated
  in GSS is part of the CUM Imbal calculation
- First of Month Imbalance data is also used in the
  calculation to decide the CUM Imbal
- The FOM Imbal number is never automated and is entered

GSS Values Complete

Repeat

AFS

How Available for Sale is Calculated in GSS

AFS Calculation

1 Estimated Residue — Optimizer manual entry

−

2 Take in Kind — Optimizer manual entry

+

3 Shrink — Optimizer manual entry

+

4 Booster Fuel — Optimizer manual entry

SUM: Take in Kind + Shrink + Booster Fuel

=

5 + Available for Sale — Automatic calculation

OR

5 - Available for Sale — Automatic calculation

OR

5 Available for Sale — Automatic calculation

Start

Buy-Sell

How Buy & Sell is Calculated in GSS

Buy and Sell Calculation

5 + Available for Sale — Automatic calculation

OR

5 - Available for Sale — Automatic calculation

−

6 Base Load & Term — Optimizer manual entry

=

7 + Sell
- If more gas is produced than contractually forecasted, there is a surplus
- Gas must be sold (+ Sell) to correct the imbalance

OR

7 - Buy
- If less gas is produced than contractually forecasted, there is a deficit
- Gas must be purchased (- Buy) to correct the imbalance

OR

5 Buy / Sell
- No deficit or surplus of gas
- Buy / Sell data is auto-calculated

Next

Imbalance

How Imbalance Data is Calculated in GSS

Imbalance Data

8 FOM Imbal

+

9 CurrMo Imbal

OR

Edited Auto-population

9 CurrMO Imbal-Mod.

=

10 CUM Imbal

First of Month Imbalance
- Optimizers enter FOM value manually on a daily basis
- This value is based on what the Optimizer considers the FOM Imbal to be for that day
- Manual entry allows FOM value to be preserved in the

Current Monthly Imbalance
- Data scraped from EBB websites by RPA bots
- Auto-populated in GSS daily

Current Monthly Imbalance
- Auto-populated value can be modified by Optimizer
- Input field border turns purple indicating data has been changed manually

Cumulative Imbalance
- Automatic calculation
- Sum of FOM Imbal +

Repeat

GSS Left Navigation Flow

Left Nav - Choose Region

1 Choose a Region

Region Choice
- Click on the "Pin" icon in the top toolbar of the app to expand the region choices
- Choose from one of the 4 regions
- Selecting a region will expand the navigation panel to reveal all sub-regions and their plants

Start

Left Nav - View Entire

2 View Entire Region

Regional View
- After a region has been chosen, selecting the "View All Region" link will display all the region's plant cards for every sub-region
- Plant cards will be loaded in the default collapsed view
- Only one region at a time can be selected
- To view another region, return to the navigation

Next Step

Left Nav - View a Sub-Region

3 View a Sub-Region

Sub-Region View
- Selecting the label for a sub-region will load all the plant cards for that sub-region
- Plant cards will be displayed in the default collapsed view
- Only one sub-region at a time can be selected
- To view another sub-region, return to the navigation and choose another sub-region

Next Step

Left Nav - View a Plant

4 View a Plant

Plant Level View
- Selecting a link for an individual plant will display the plant card in the default collapsed view
- Only one plant at a time can be selected within a region
- To view another plant card, return to the navigation and choose another plant from either the same region or navigate to another

Repeat

Toolbar Flow Title

GSS Toolbar Flow - Primary Interactions

A-Choose Region

A Choose Your Region

How do I do this?
- Choose location dropdown menu in the top toolbar

What are the regions?
- Select from 4 regions: Midcon, Rockies, Permian, South

What can be selected in the region?
- Select a sub-region to view all the associated plant cards
- Select a single plant to view the plant card within a region

Start

B-Select the Date

B Select the Date

How do I do this?
- Select date picker and choose a month/day/year for daily
- Select date picker and choose only the month/year for First of Month

Next

C-Toggle Plant/Pipe View

C Toggle Plant/Pipe

How do I do this?
- Click on the plant / pipe toggle to change the data to view plants and pipes

What does this do?
- Toggle will change how plant cards are displayed
- Plant view groups GSS data by plant and its associated pipes
- Pipe view groups GSS data by pipe and its

Next

D-Toggle Daily/Monthly View

D Toggle Daily/Monthly

How do I do this?
- Click on the daily / monthly toggle to change how data will be displayed

What does this do?
- Toggle will change plant card data to daily or monthly
- Daily view displays only GSS data for the day chosen in the

Next

E-Save GSS Data

E Save GSS Data

Why do I need to do this?
- Saving GSS data is required before the daily AFS numbers can be provided to the Traders

How do I know data has been saved?
- Data must be saved after GSS values are complete
- Optimizers must successfully complete GSS data entry fields or data cannot be saved
- An error message results if data is missing or is incorrectly

Next

F-Download Trader AFS Spreadsheet

F Trader AFS Download

How to create a Trader AFS Spreadsheet
- Select the "Trader AFS" button in the toolbar
- Choose the spreadsheet(s) to download and select

Next

G-AFS Trader Notification

G AFS Trader Notification

How are Traders notified about AFS?
- Traders receive an email by 5:30am MST (or MDT) notifying them the AFS numbers are available for that day

How do Traders receive the AFS numbers?
- AFS numbers are automatically uploaded to their spreadsheet for calculating imbalance volumes

NOTE: Future Automation
- Automation is currently in process to eliminate the .CSV download of AFS spreadsheets

Next

Toolbar Flow-Secondary

Toolbar Flow - Secondary Interactions

E-View EBB Volumes in Power BI

* GSS Volume Dashboard

What is this dashboard for?
- Select the "EBB Volumes" link to view imbalance data in Power BI that is scraped from EBB websites by RPA bots

Start

G-Optional-Expand All Cards

* Expand All Cards

How do I do this?
- Select the "Expand All" icon in the toolbar to reveal all

Next

H-Optional-Collapse All Cards

* Collapse All Cards

How do I do this?
- Select the "Collapse All" icon in the toolbar to close all

Next

I-Optional-Copy Previous Day

* Copy Previous Day

Where is this link?
- Optimizer clicks the three ellipse icon to open selections

What does this do?
- When this option is selected, GSS copies data values from

Next

J-Optional-Copy Previous Month

* Copy Previous Month

Where is this link?
- Optimizer clicks the three ellipse icon to open selections

What does this do?
- When this option is selected, GSS copies data values from

Next

K-Optional-Load Last Saved Values

* Load Last Saved Values

Where is this link?
- Optimizer clicks the three ellipse icon to open selections

What does this do?
- When this option is selected, GSS loads the data

Next

L-Optional-Clear All Data

* Clear All Data

Where is this link?
- Optimizer clicks the three ellipse icon to open selections

What does this do?
- When selected, Optimizer can clear all data that has been

Next

Plant Card Secondary Interactions

Plant Card - Secondary Interactions

Optional - Add Plant Comments

* Plant Comment Data

Data Input Method
- Manual entry by Optimizers only

How is data determined?
- Optimizers can record issues or other types of information about a plant or its pipes in this text field
- Traders can only view the comments as "read-only"

Where does data come from?
- Optimizers can add comments for both Daily and First of Month AFS
- Comments are entered only by Optimizers in the text

Next

Optional - View Imbal Volumes Totals

* EBB Imbalance Data

Total Current Monthly Imbalance

Data Input Method
- Dynamic data from GSS Volume Dashboard in Power BI

How is data determined?
- The "Imbalance Volumes" button on the expanded Daily AFS plant card view launches a "Total CurrMo Imbalance" overlay screen revealing EBB imbalance values for each tailgate in a given plant
- Imbalance data is tallied for each tailgate and all total values equal the "Total CurrMo Imbalance" for that month

Next

Optional - View Imbal Volumes Overlay Screen

* Imbalance Volumes

EBB Imbalance Data Overlay Screen

Overlay screen example
- Optimizer selects the "Imbalance Volumes" button in the expanded plant card to open EBB Imbalance Data overlay

EBB Imbalance Data

KINGFISHER	Imbalance Date: Feb. 28, 2020
OGT	
171554	Total
No data	No data
PEPL	
16422	Total
0	0
SS	
12123	Total
-5,760	-5,760
Total CurrMo Imbalance	-5,760

Repeat