

Roles and responsibilities

- WS6 Options paper will include requirements for each option and the roles and responsibilities of industry parties and customers in relation to these requirements.
- These slides set out diagrams showing the roles and responsibilities of a selection of options.
 - We are looking for volunteers to help develop diagrams for the other Options.
 - These diagrams will be used in the Options paper.
- Each slide shows the flows of payments, billing, data, notifications and commands for an option. This indicates which party is responsible for each element, and what other parties' roles are.
- Note that for simplicity these diagrams indicate the DNO or supplier leading engagement and managing data and communications. However, a third party could take this role as an agent of the customer.
- The key below sets out the main processes for the options, aside from initial and ongoing engagement with the customer, which is set out on each slide.

Key:



= data flows to industry



= communications infrastructure / notifications



= billing flow



= payments to customer



= chain of command

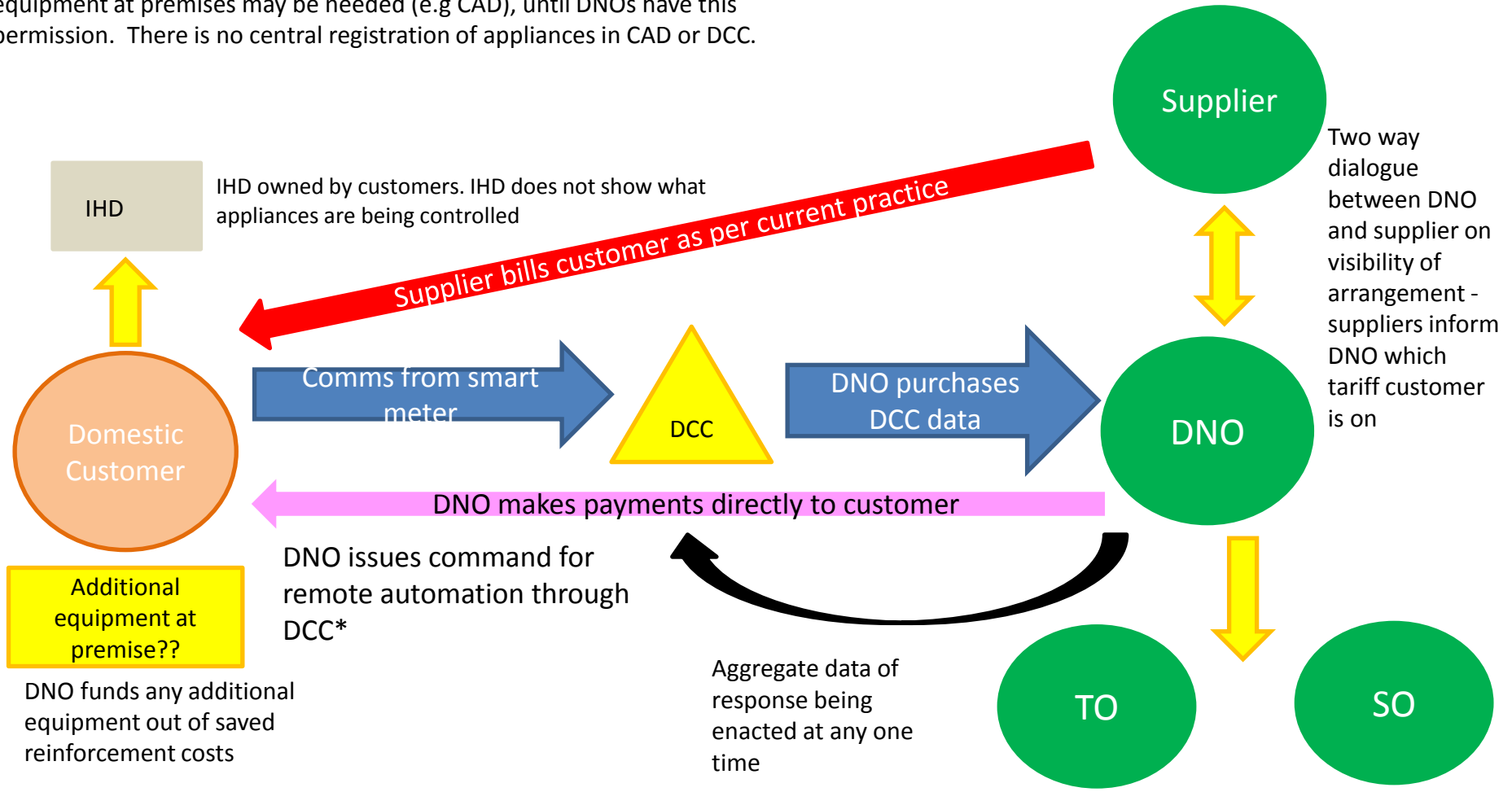
- The pros and cons of each option are listed in the Options Paper

Key Questions

- Do supplier and DNO both need to buy DCC data or can they share data when needed for validation and billing?
- Would remote automation commands be better done via supplier or direct from DNO – ie would DNOs require the speed of a direct command?
 - Can all remote automation commands be made via smart metering infrastructure?
- What interaction do DNOs need to have with suppliers before customers agree contracts?
- What information do suppliers/DNO/TO/SO need when:
 - a) a customer is signed up to a new DSR contract; and
 - b) a response is called on remotely?

DNO dynamic tariff with remote automation

*Requires change of policy as current smart metering system policy does not permit DNOs to remotely control devices. Additional comms equipment at premises may be needed (e.g CAD), until DNOs have this permission. There is no central registration of appliances in CAD or DCC.



DNO leads engagement with customer, responsible for signing customer up and providing support

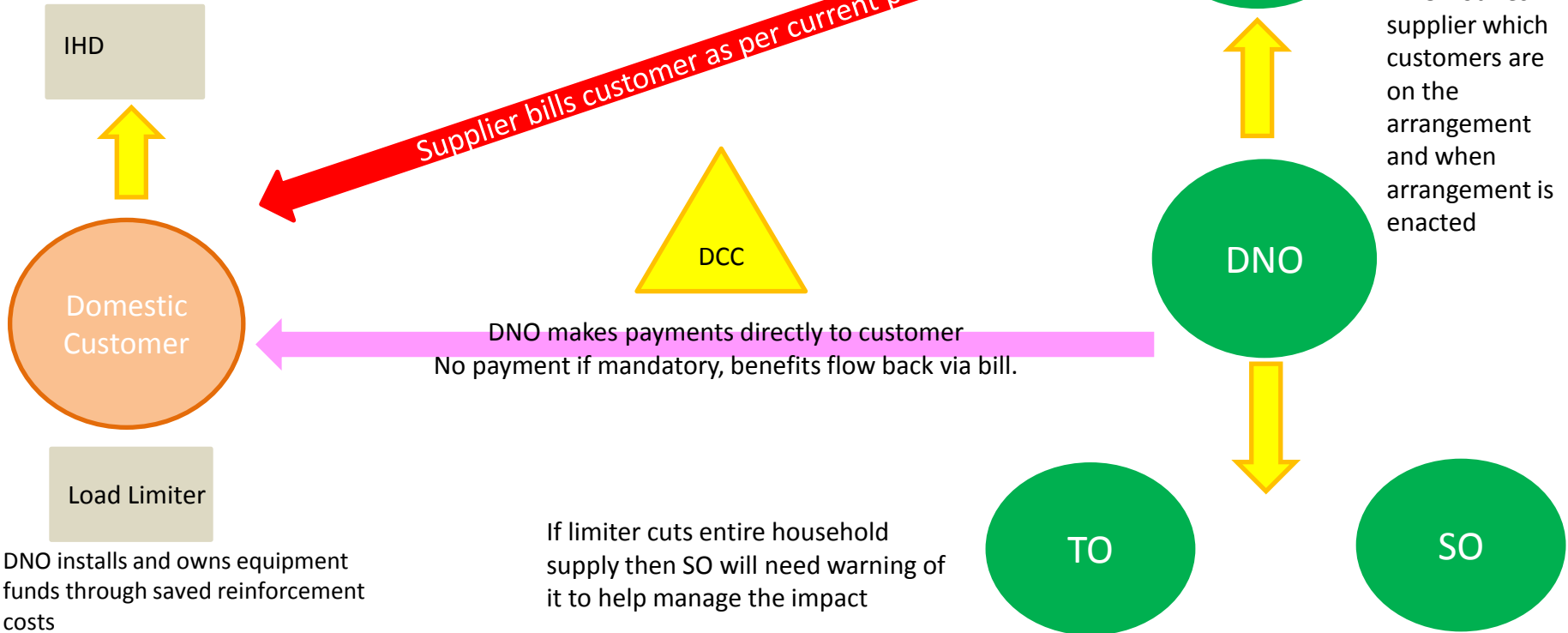
Load Limiter (mandatory or voluntary options)

*Option under review as limit would cause whole household supply to be curtailed

Barriers

- Specifications for load control (e.g. appliance specific, TOU)
- Specifications of IHD (e.g. to warn customers when approaching load

IHD owned by customers, required so customers can see when they're approaching the load limiting level



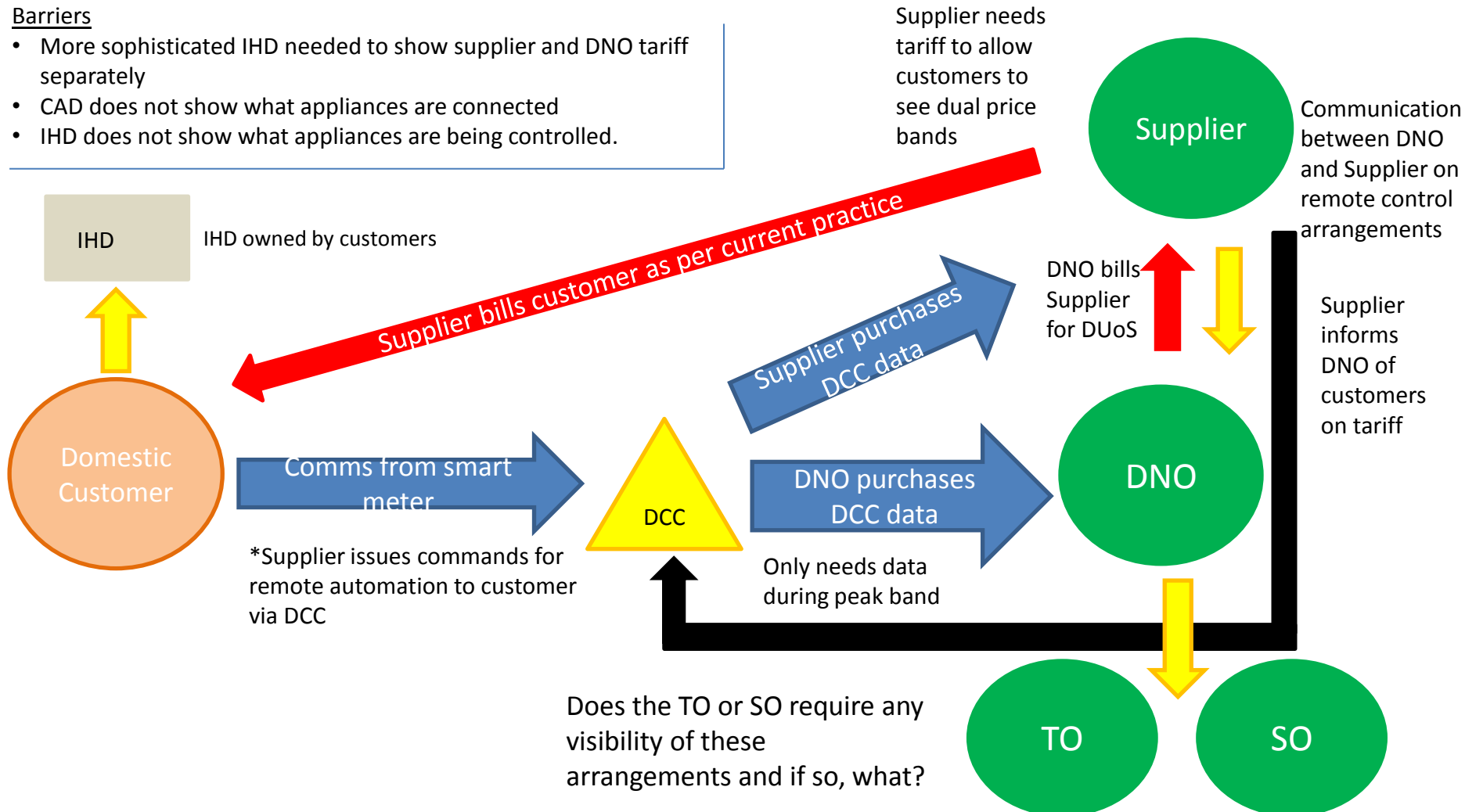
DNO leads engagement with customer (or pays third party to do this) responsible for signing customer up and providing support

- * Process is the same for automation at premises, with the exception that no command is issued
- Process is the same for differential DUoS tariff via supplier

Two band DUoS charge via supplier – remote automation

Barriers

- More sophisticated IHD needed to show supplier and DNO tariff separately
- CAD does not show what appliances are connected
- IHD does not show what appliances are being controlled.



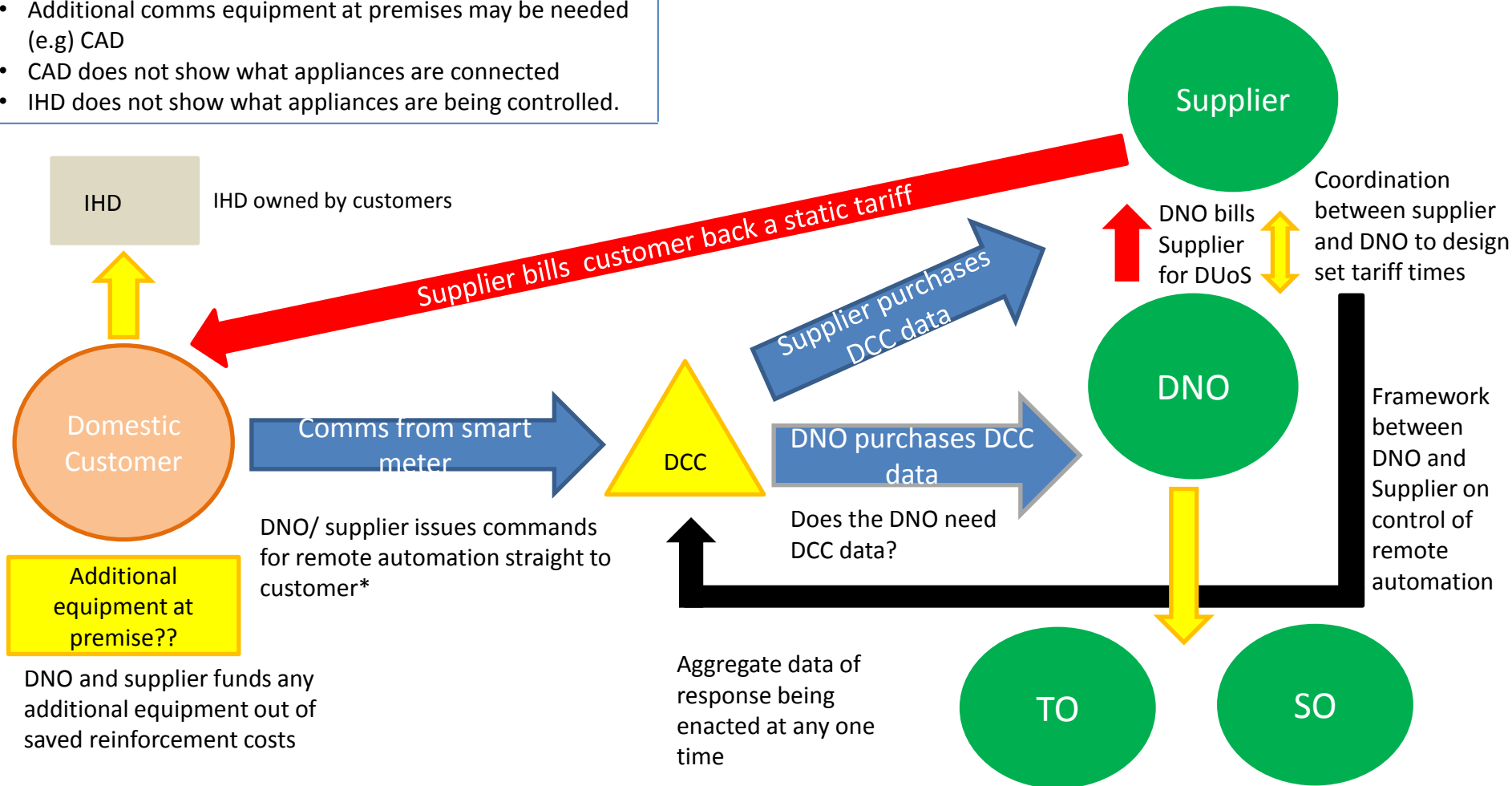
Supplier leads engagement with customer responsible for signing customer up and providing support

Static tariff with remote automation

** if the tariff is a joint tariff, and the supplier is already engaging with the customer, it doesn't make sense to alter the arrangement – a new DNO billing system would add costs to consumer

Barriers

- *Current smart metering policy does not permit DNOs to remotely control devices – changes needed
- Additional comms equipment at premises may be needed (e.g CAD)
- CAD does not show what appliances are connected
- IHD does not show what appliances are being controlled.

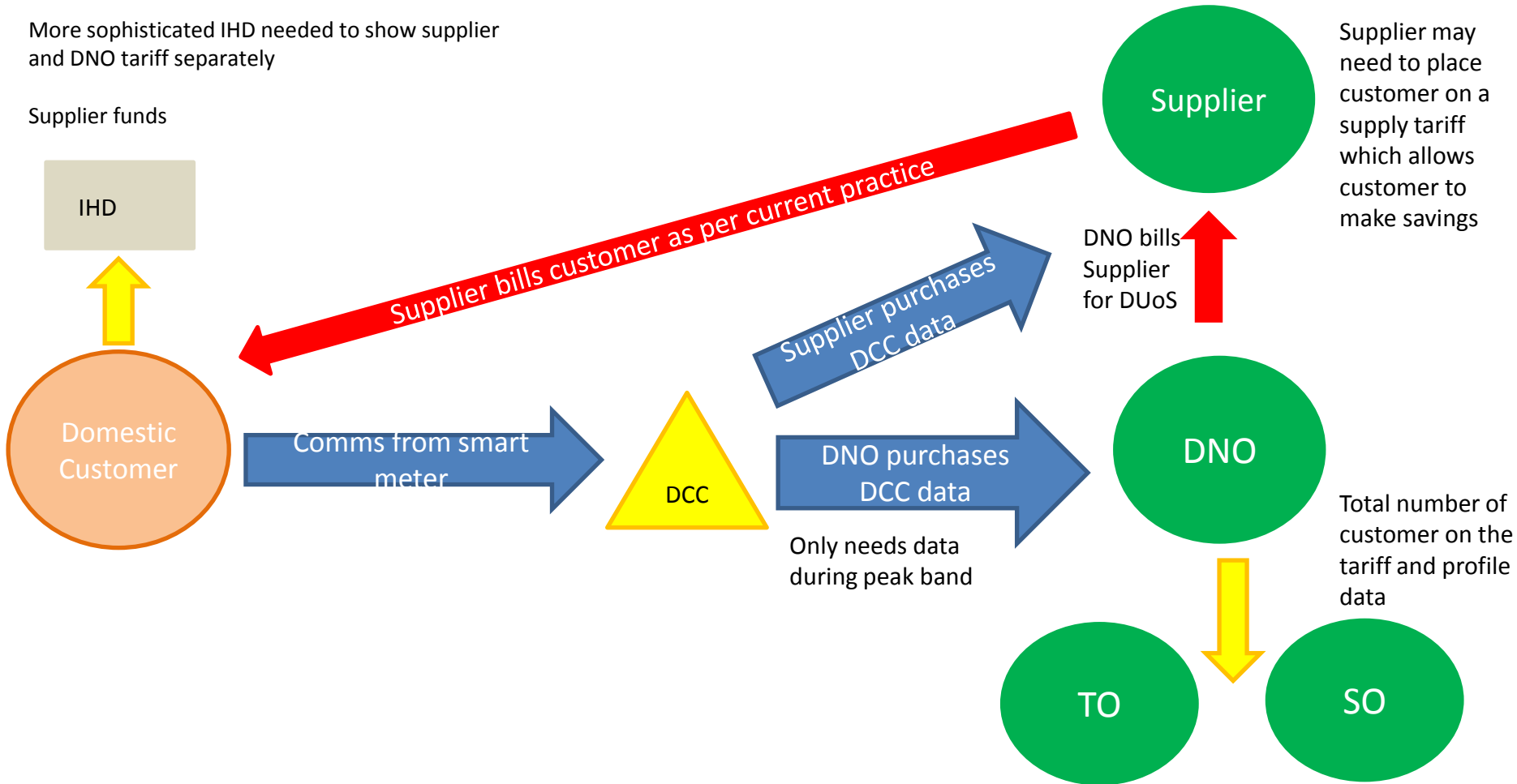


Supplier (or a third party on behalf of the consumer) leads engagement with customer responsible for signing customer up and providing support**

Two band DUoS charge via supplier

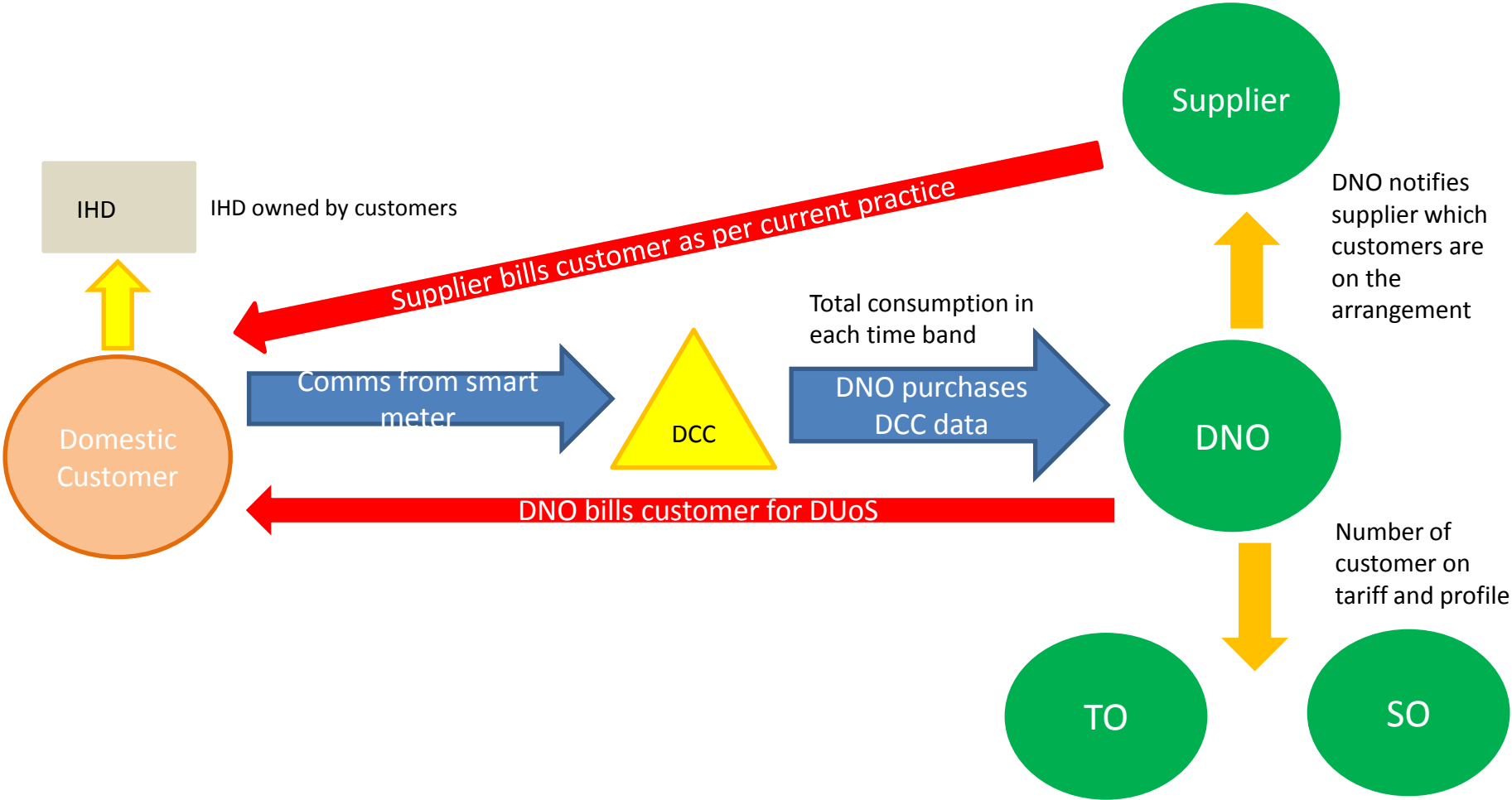
More sophisticated IHD needed to show supplier and DNO tariff separately

Supplier funds



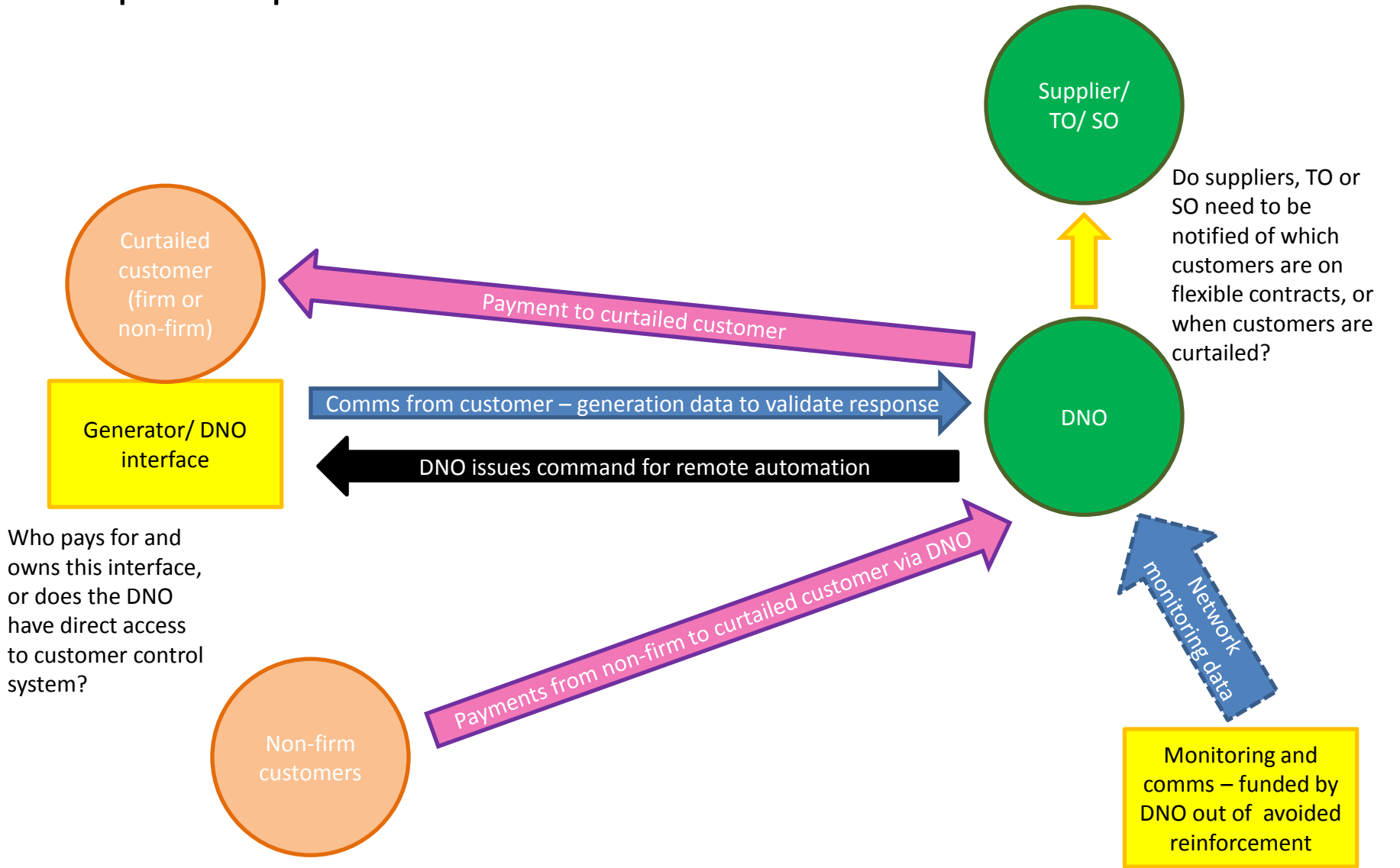
Supplier leads engagement with customer responsible for signing customer up and providing support

Differential DUoS charge direct to consumer



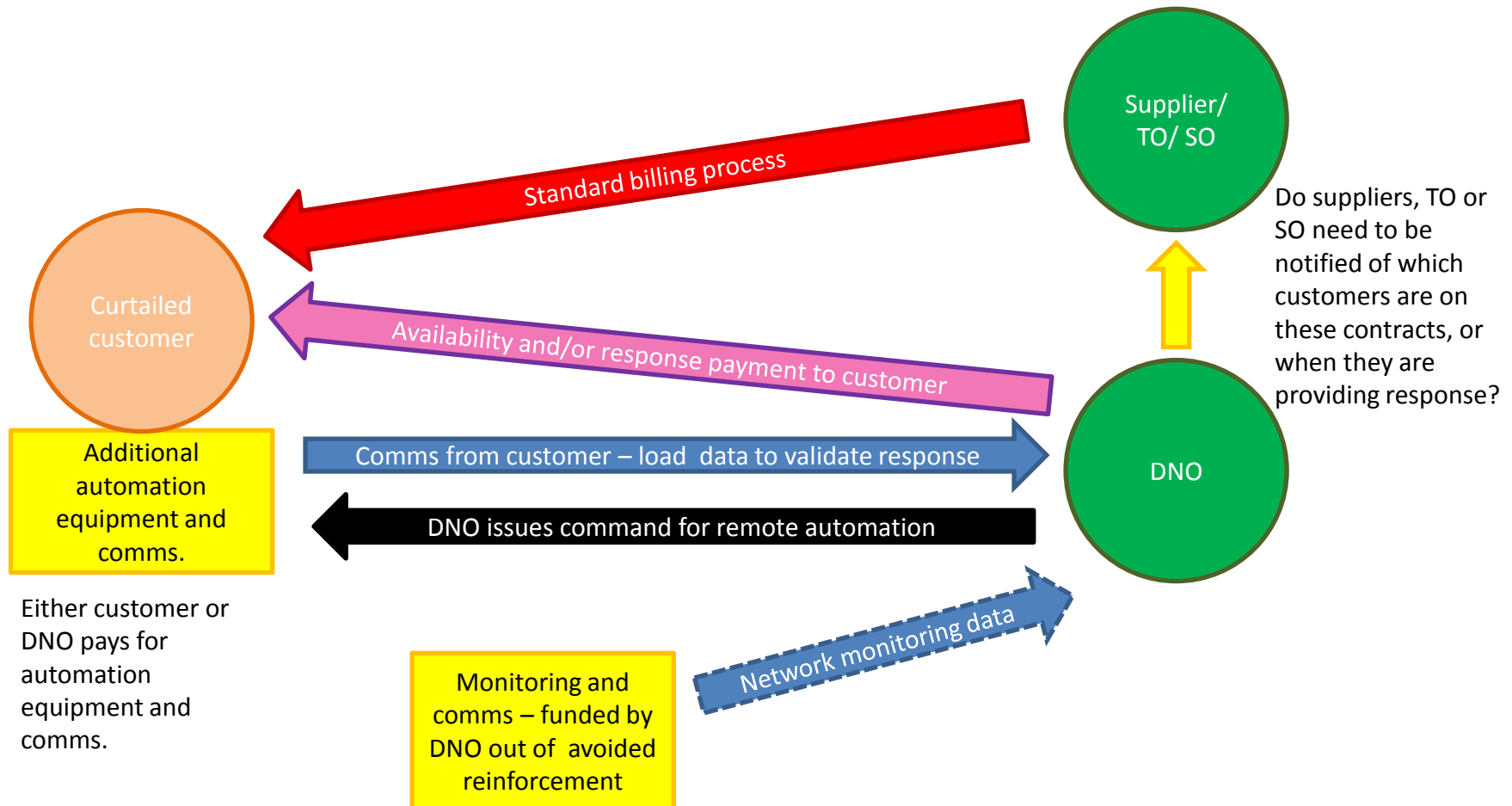
DNO leads engagement with customer (or pays third party to do this) responsible for signing customer up and providing support

DG option: upfront auction



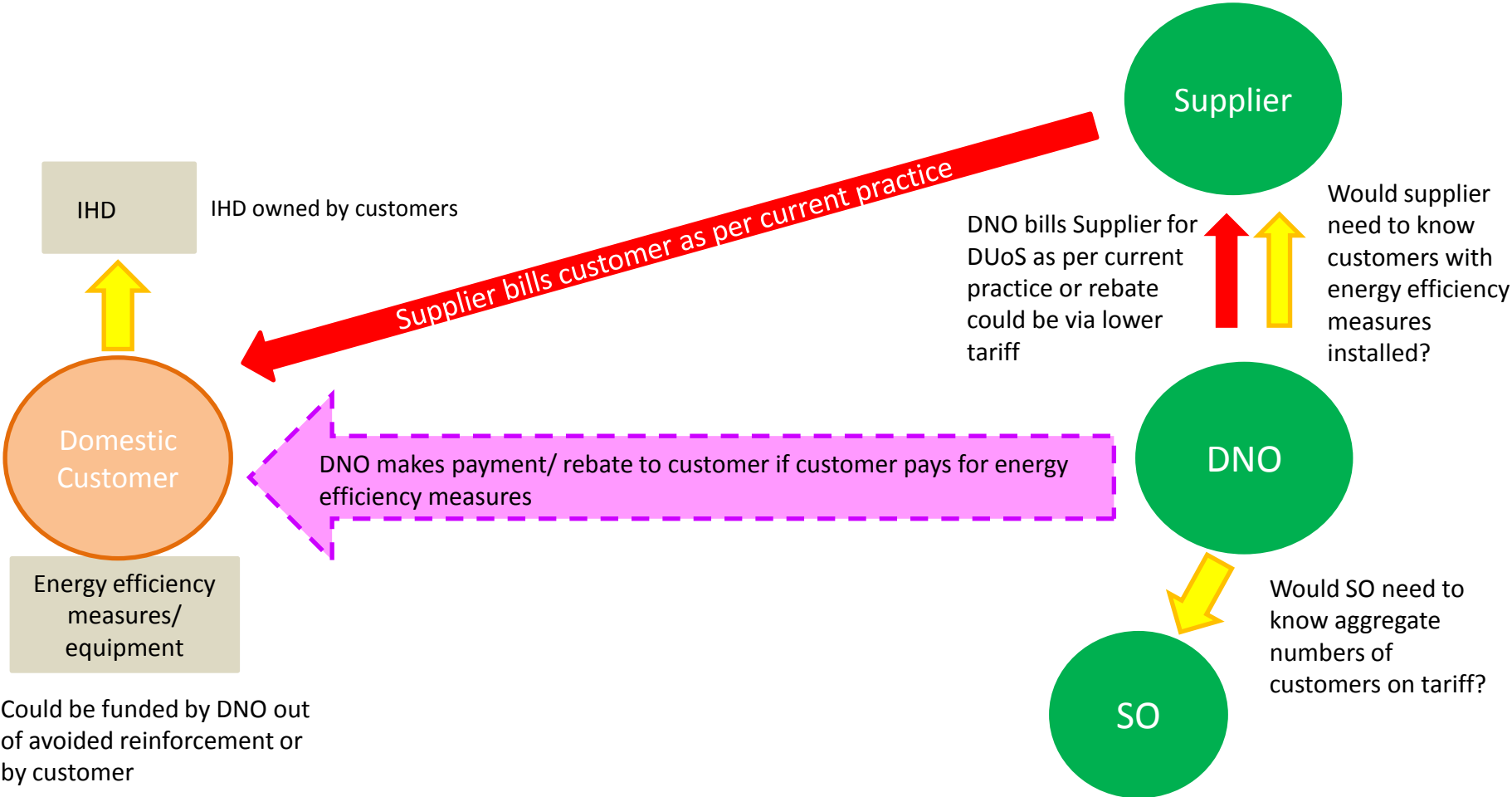
DNO leads engagement with customer and runs auction process (or pays third party to do this)

I&C option: 'pay as you go' response/ availability and utilisation payment.



DNO leads engagement with customer (or pays third party to do this)

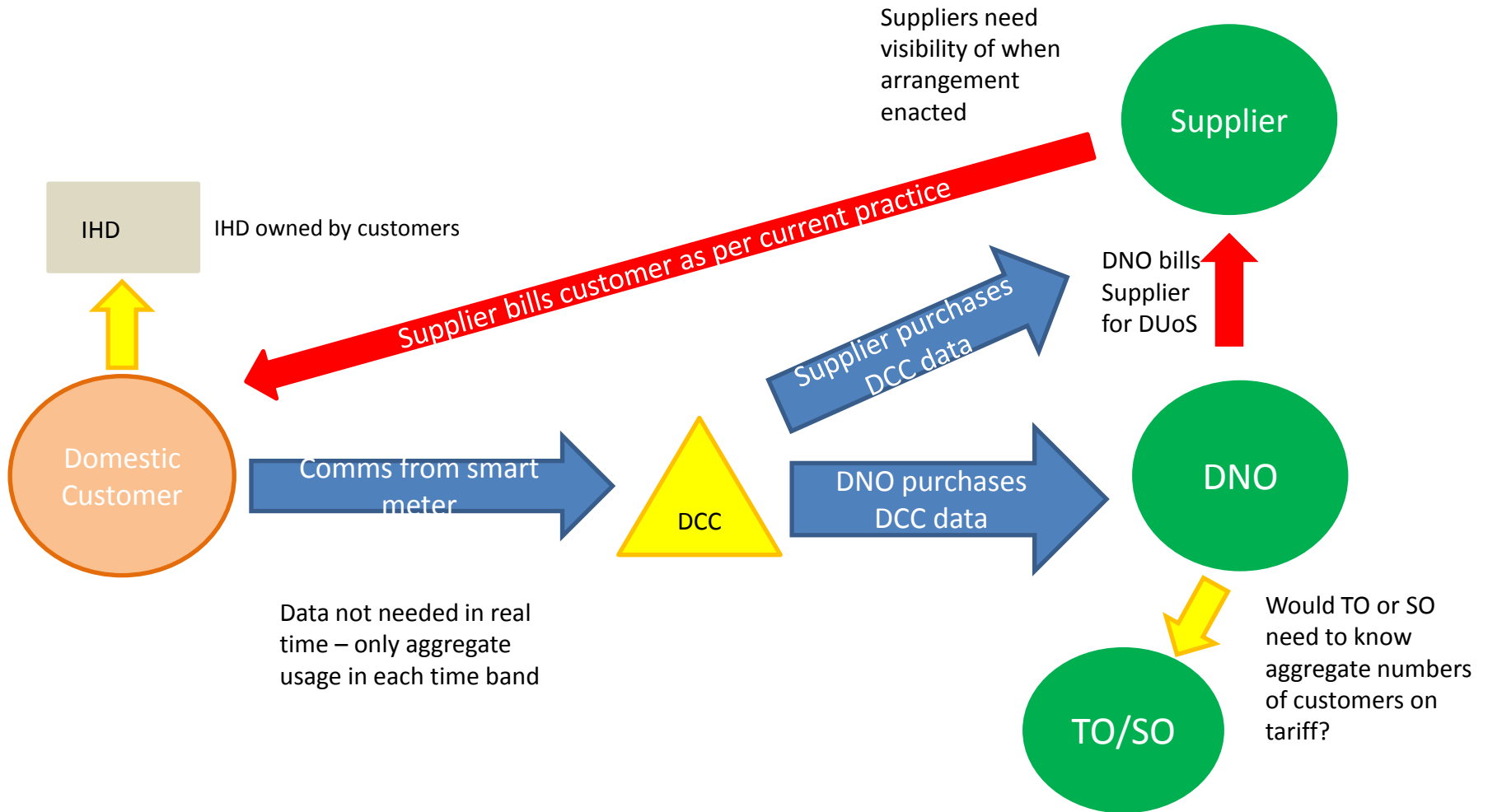
Energy efficiency measures



DNO leads engagement with customer, responsible for signing customer up and providing support

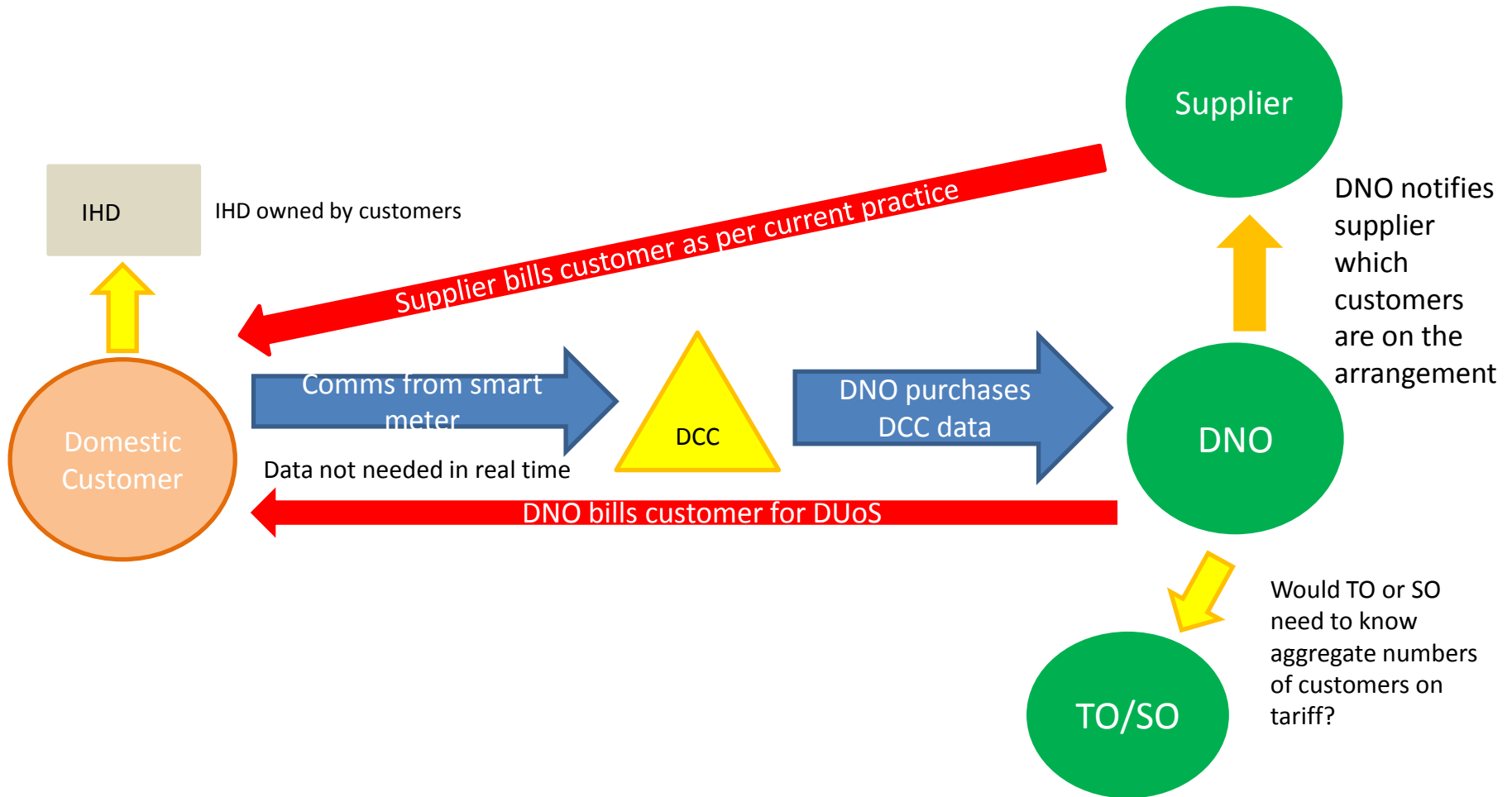
Slides from WS6 members

Restructuring DUoS charge via supplier



Supplier leads engagement with customer responsible for signing customer up and providing support

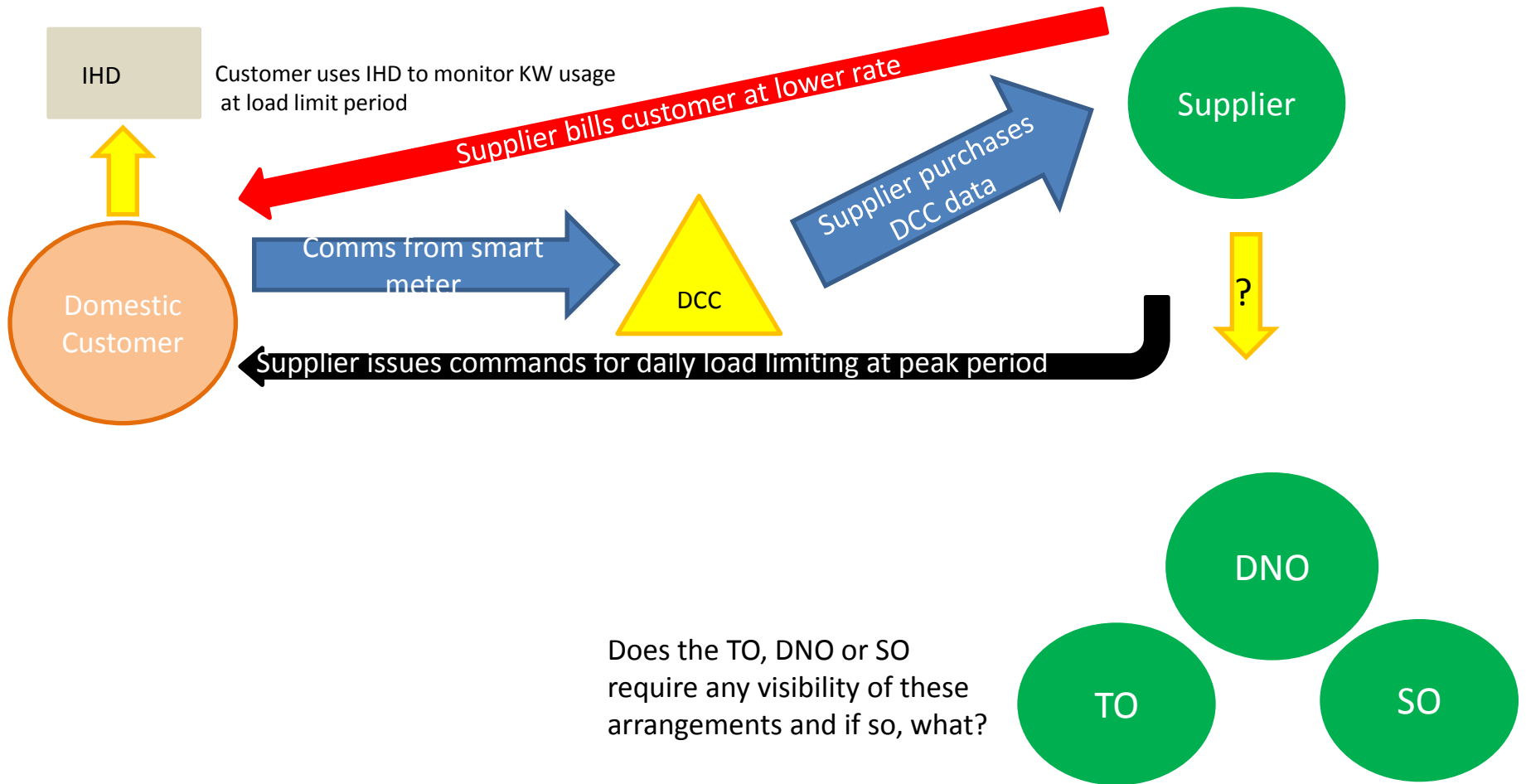
Restructuring DUoS charge direct to consumer



DNO leads engagement with customer (or pays third party to do this) responsible for signing customer up and providing support

Supplier load limiting

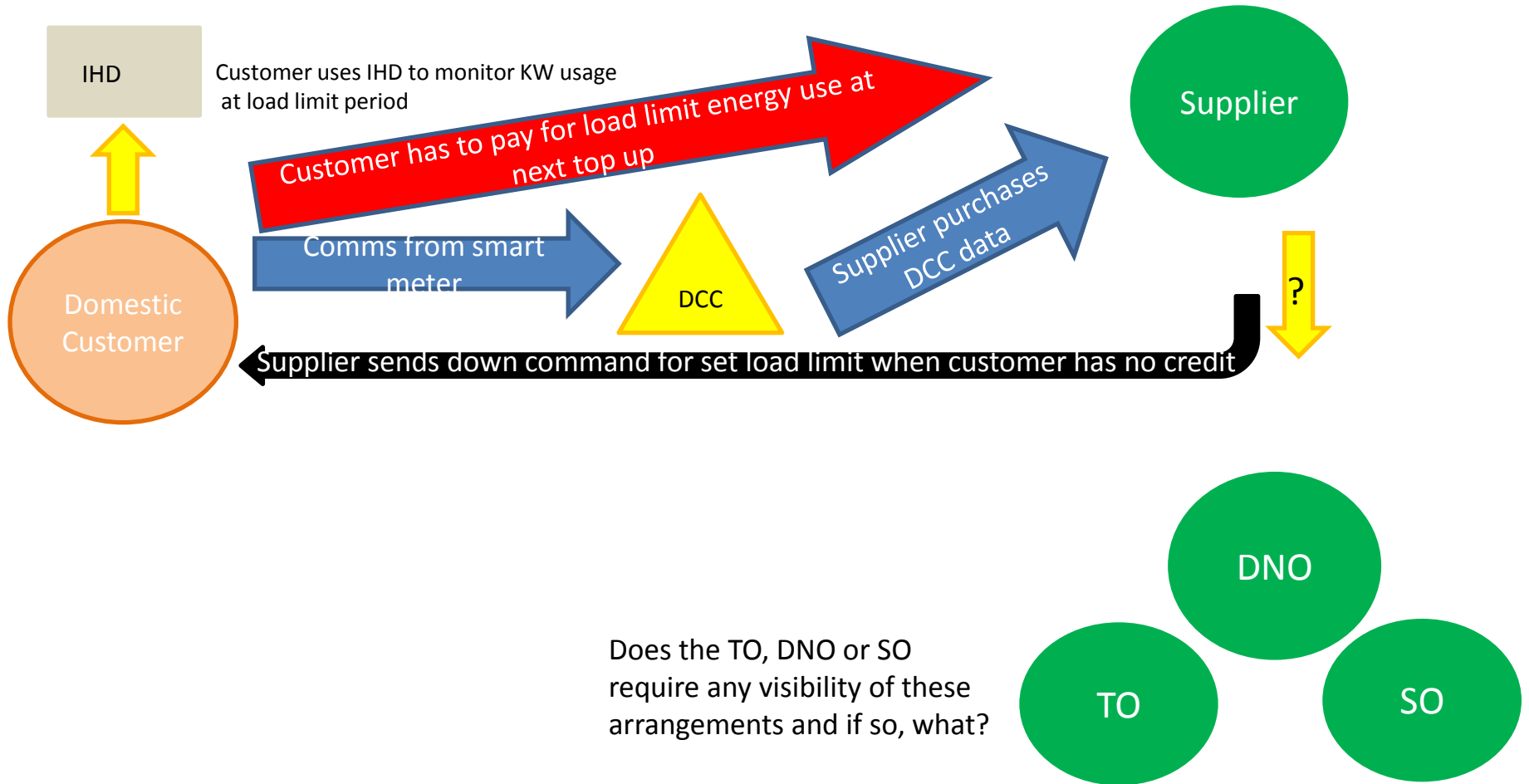
Advantage is known load limiting periods. This could work for credit and PPM customers



Supplier leads engagement with customer responsible for signing customer up and providing support

Supplier load limiting – PPM customers when no credit

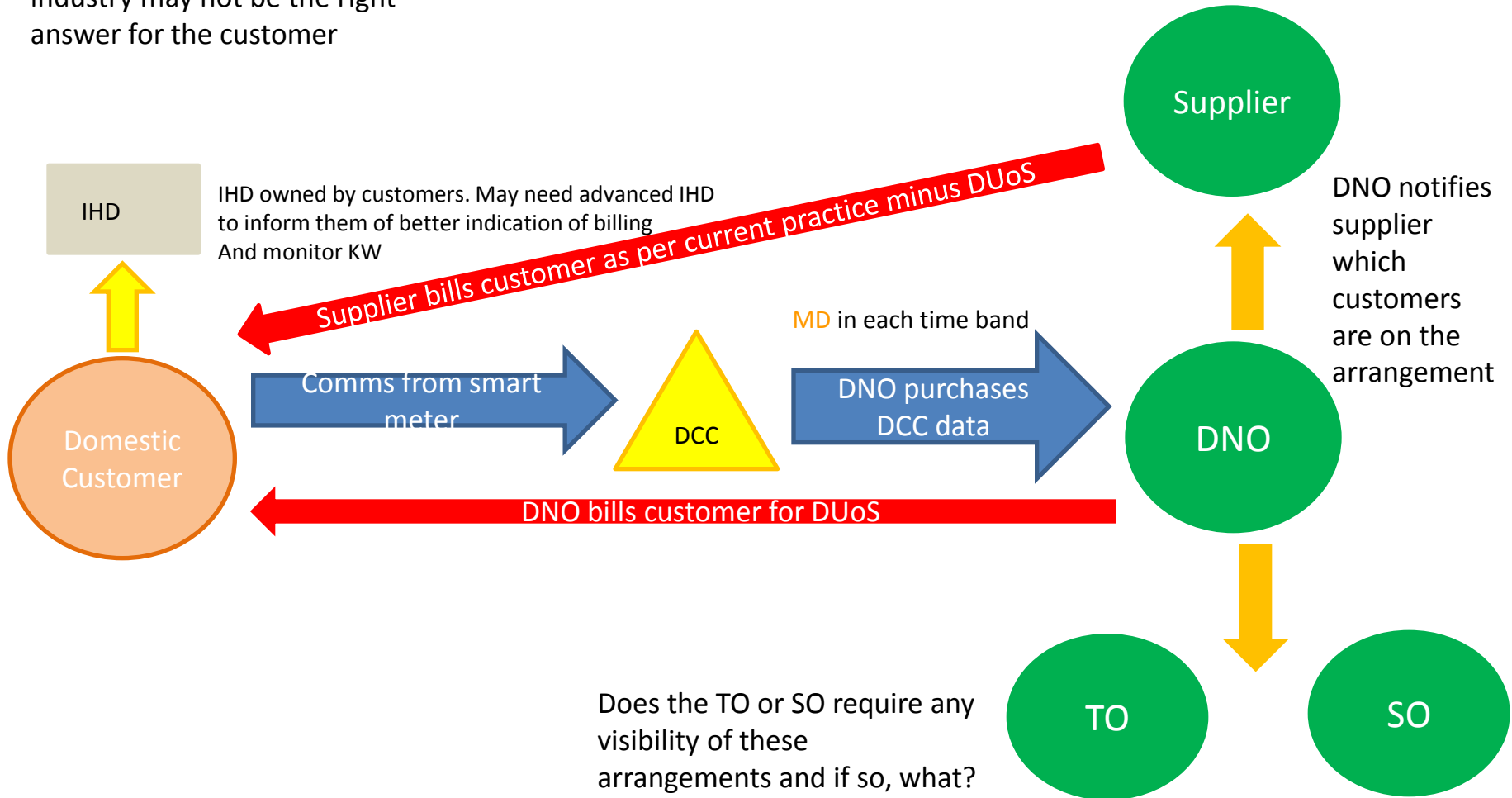
Disadvantage is no known load limiting periods in advance. But no spikes in demand rise or fall as large number of customers would load limit at the same time



Supplier leads engagement with customer responsible for signing customer up and providing support

Differential DUoS charge direct to consumer

Double billing system in the industry may not be the right answer for the customer

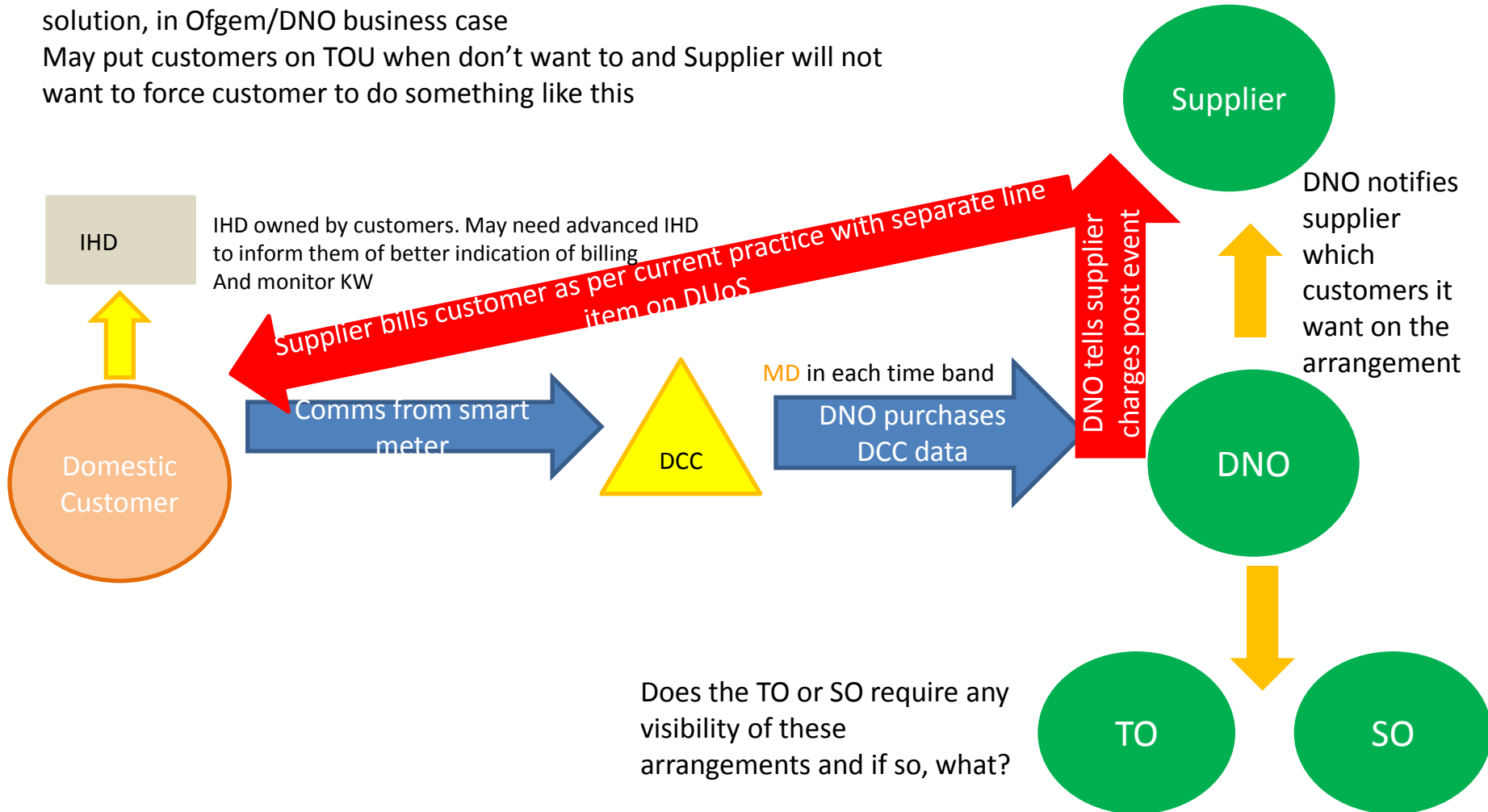


DNO leads engagement with customer (or pays third party to do this) responsible for signing customer up and providing support

Differential DUoS charge via Supplier

Additional supplier costs have to be taken in to account for this solution, in Ofgem/DNO business case

May put customers on TOU when don't want to and Supplier will not want to force customer to do something like this

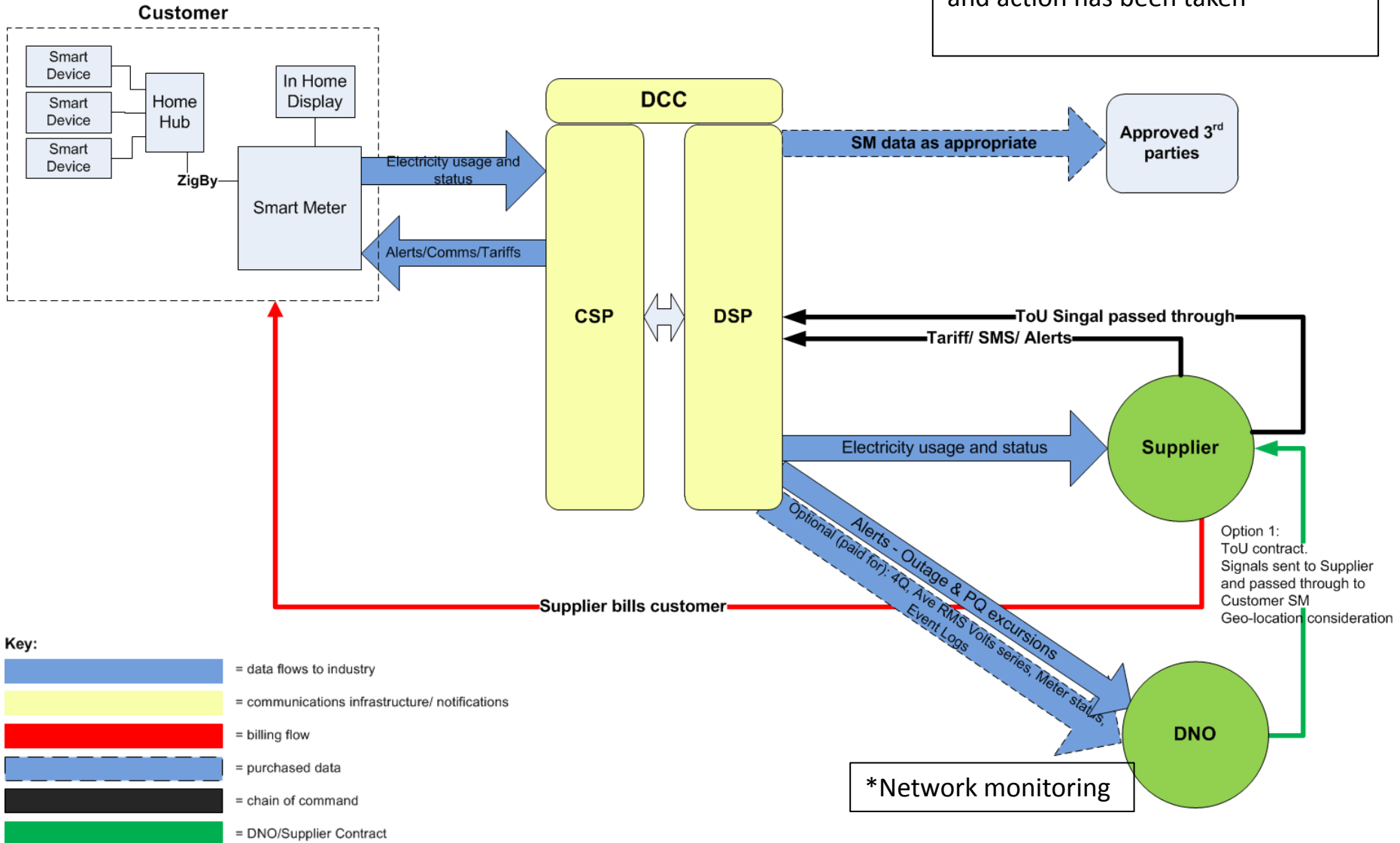


Supplier leads engagement with customer responsible for signing customer up and providing support

DNO dynamic tariff **with** automation

Signal passed through the **supplier**

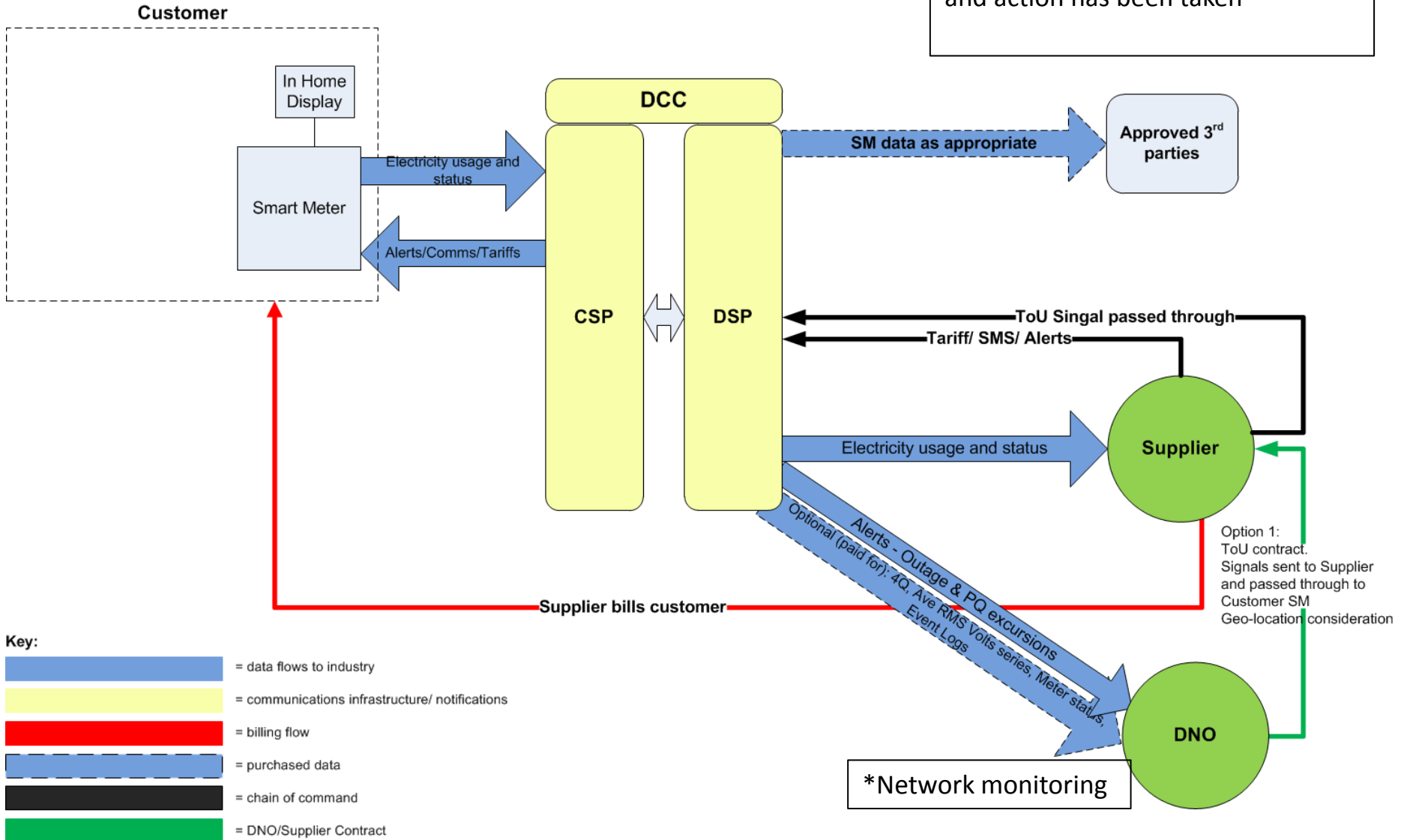
* This would require a feedback loop by which the DNO can verify that the signal has been received and action has been taken



DNO dynamic tariff **without** automation

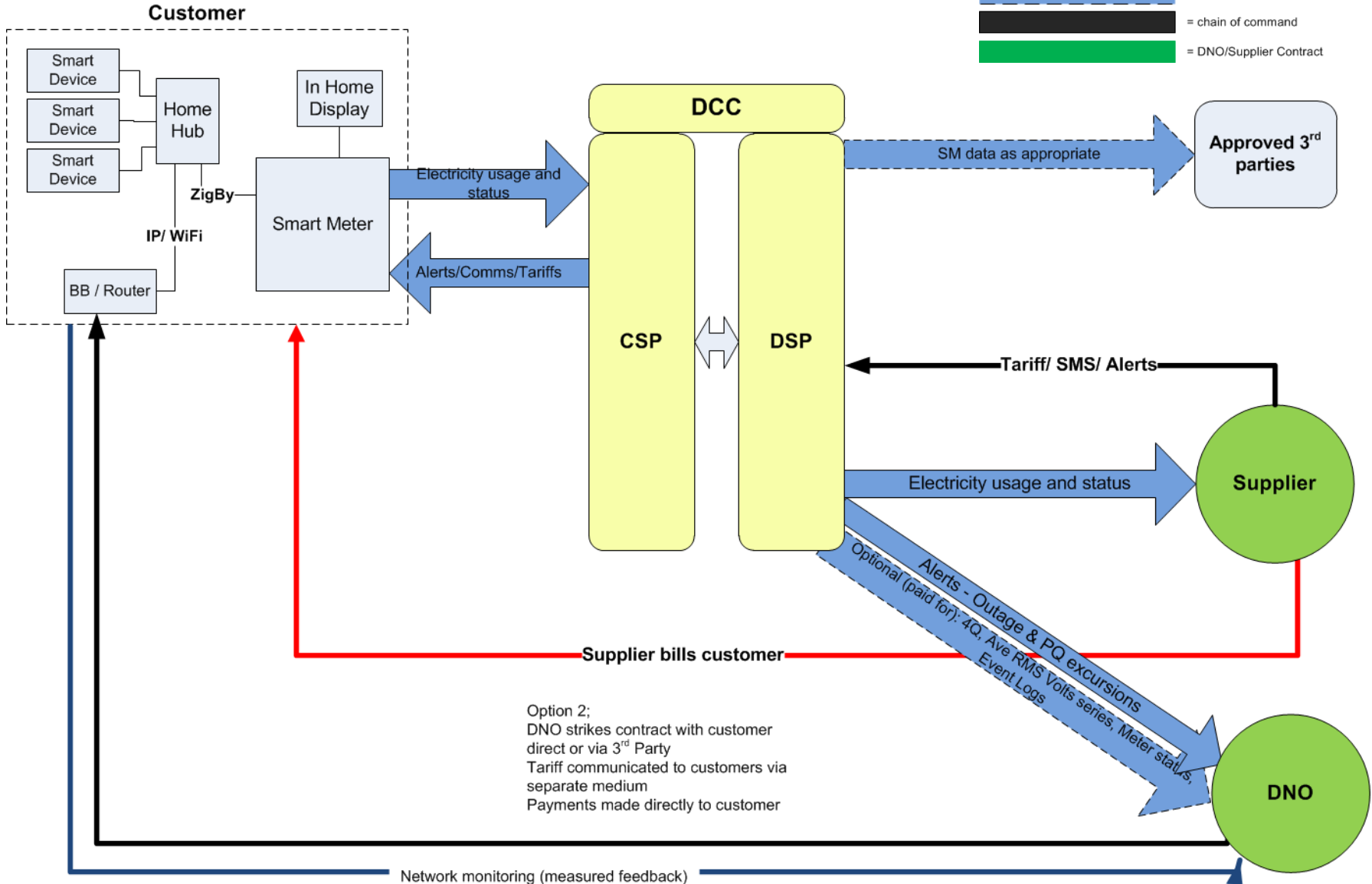
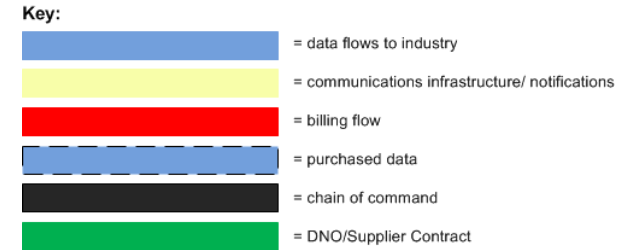
Signal passed through the **supplier**

* This would require a feedback loop by which the DNO can verify that the signal has been received and action has been taken



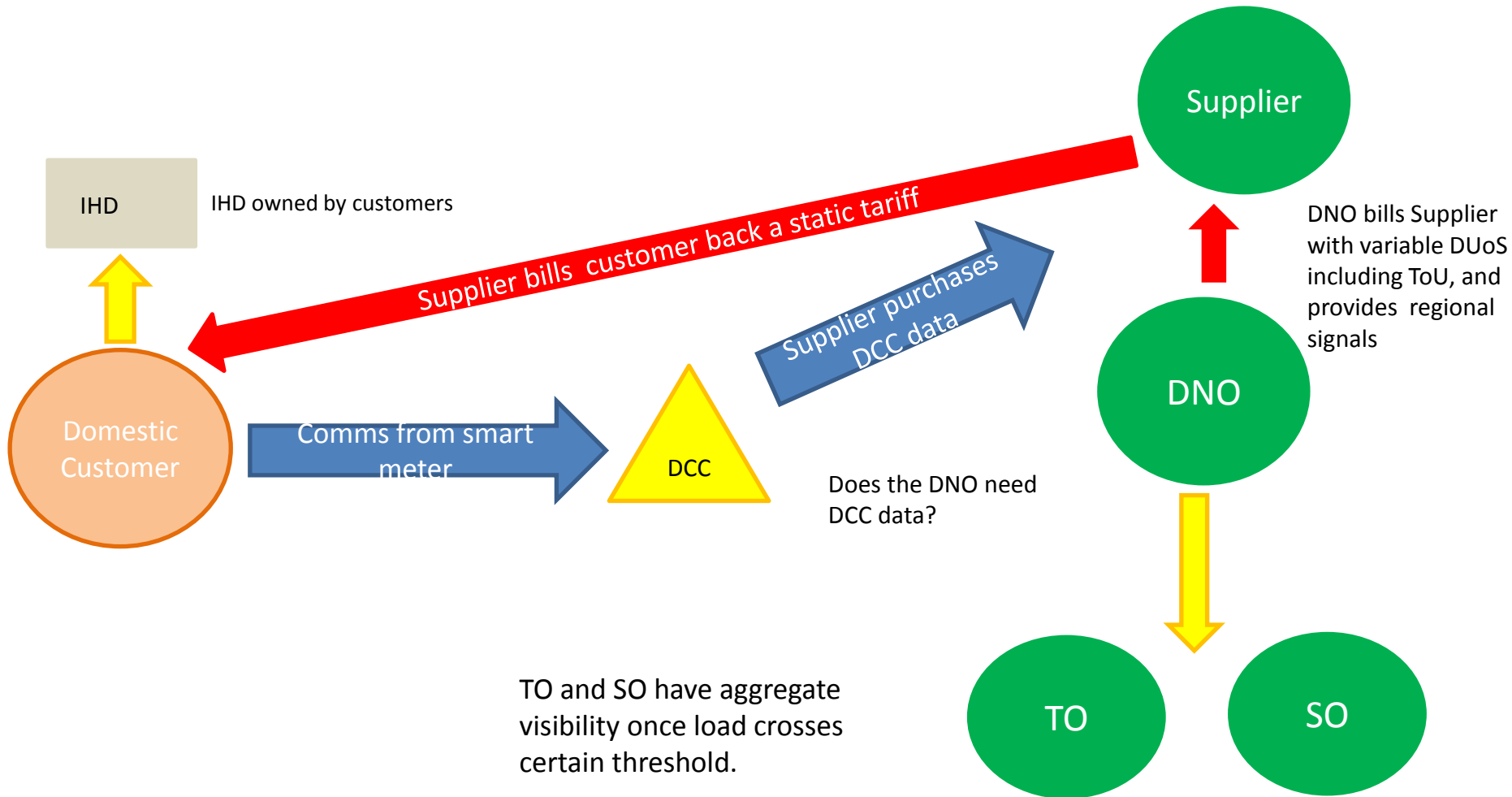
DNO dynamic tariff with remote automation

Signal passed through the DNO



Static tariff without automation

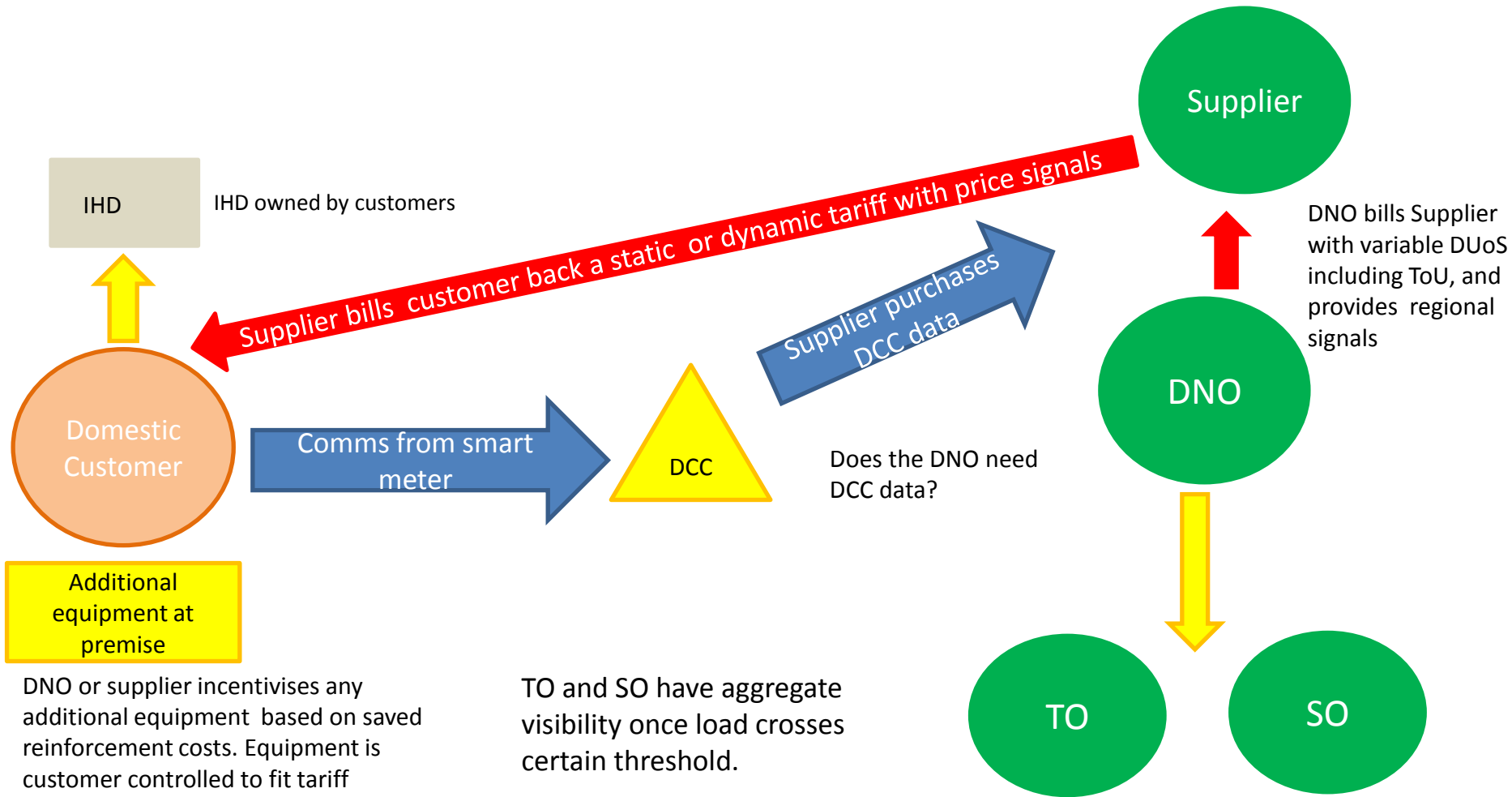
** if the tariff is a joint tariff, and the supplier is already engaging with the customer, it doesn't make sense to alter the arrangement – a new DNO billing system would add costs and confusion to consumer



Supplier leads engagement with customer, responsible for signing customer up and providing support.** Similar to current tariff arrangements and easier for customer to grasp. Requires customers to actively shift load

Static tariff with automation at premises

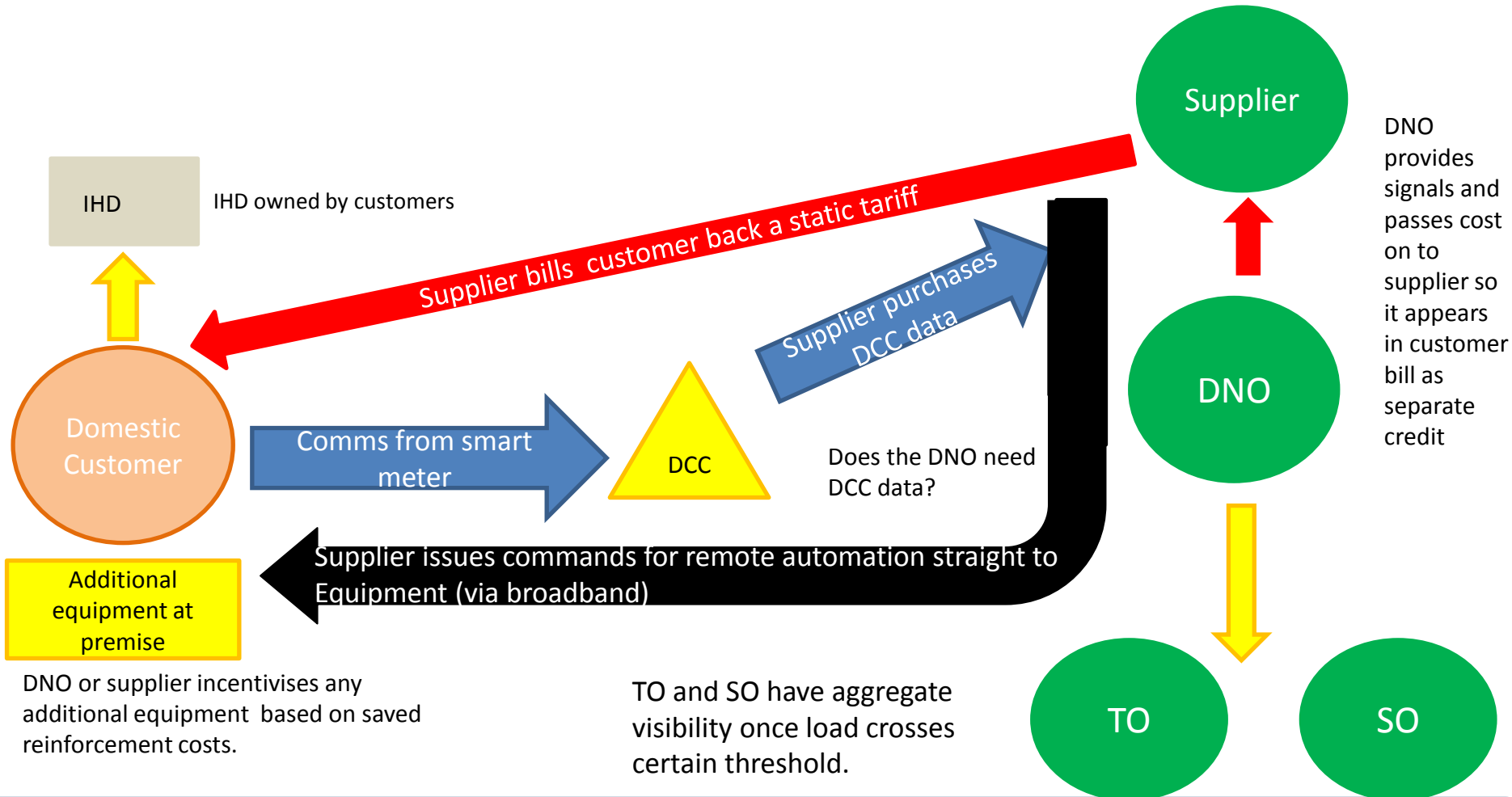
** if the tariff is a joint tariff, and the supplier is already engaging with the customer, it doesn't make sense to alter the arrangement – a new DNO billing system would add costs and confusion to consumer



Supplier leads engagement with customer responsible for signing customer up and providing support**. Relatively simple for customer to grasp as long as appropriate incentives provided

Static tariff with remote automation

** if the tariff is a joint tariff, and the supplier is already engaging with the customer, it doesn't make sense to alter the arrangement – a new DNO billing system would add costs and confusion to consumer



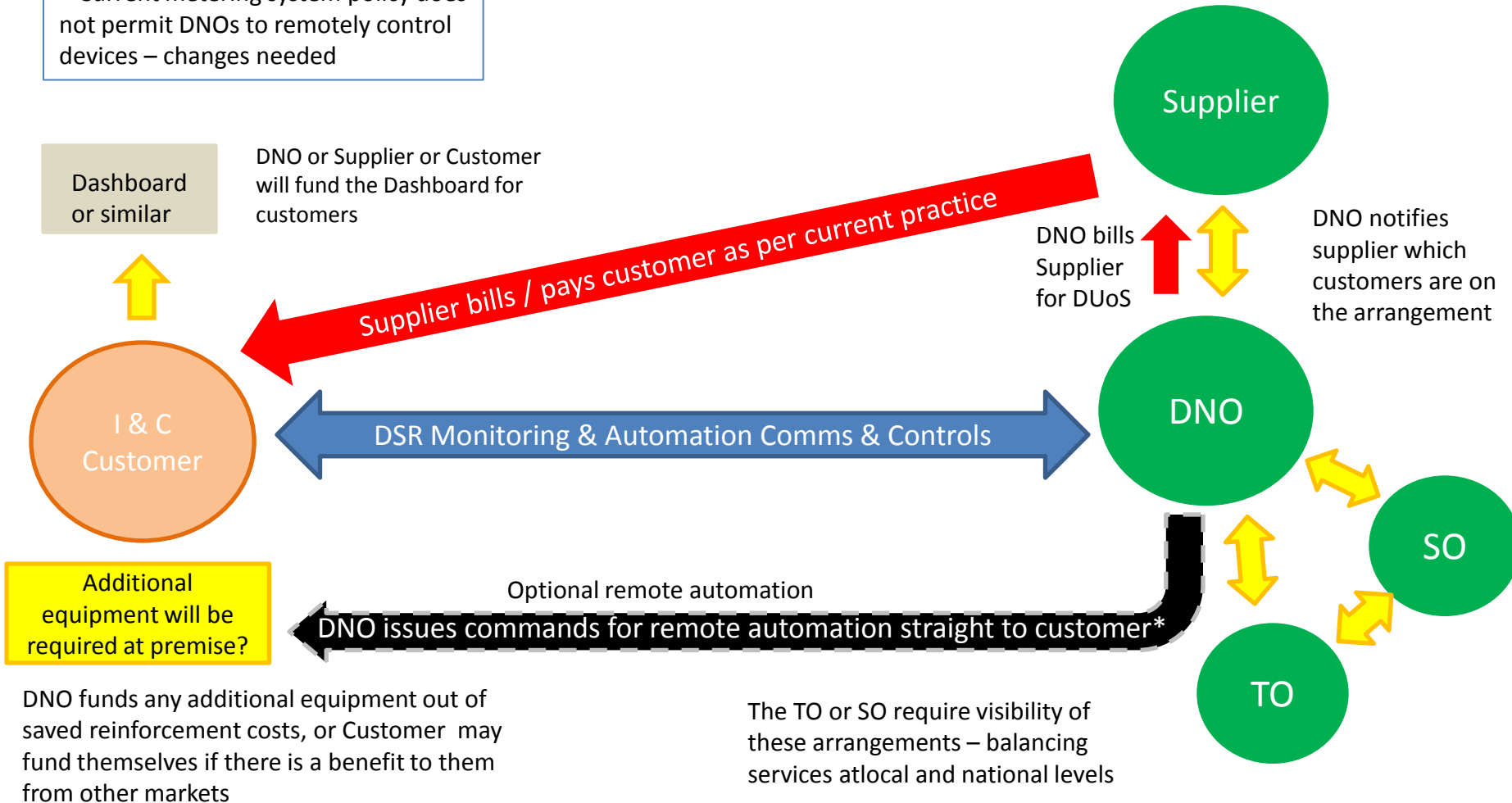
Supplier leads engagement with customer responsible for signing customer up and providing support**. Most complex industry arrangement but hassle free for customer.

Restructuring of DUoS Charge via Supplier

Barriers

* Current metering system policy does not permit DNOs to remotely control devices – changes needed

Suppliers require visibility of when arrangement enacted for balancing mechanisms?



DNO funds any additional equipment out of saved reinforcement costs, or Customer may fund themselves if there is a benefit to them from other markets

The TO or SO require visibility of these arrangements – balancing services at local and national levels

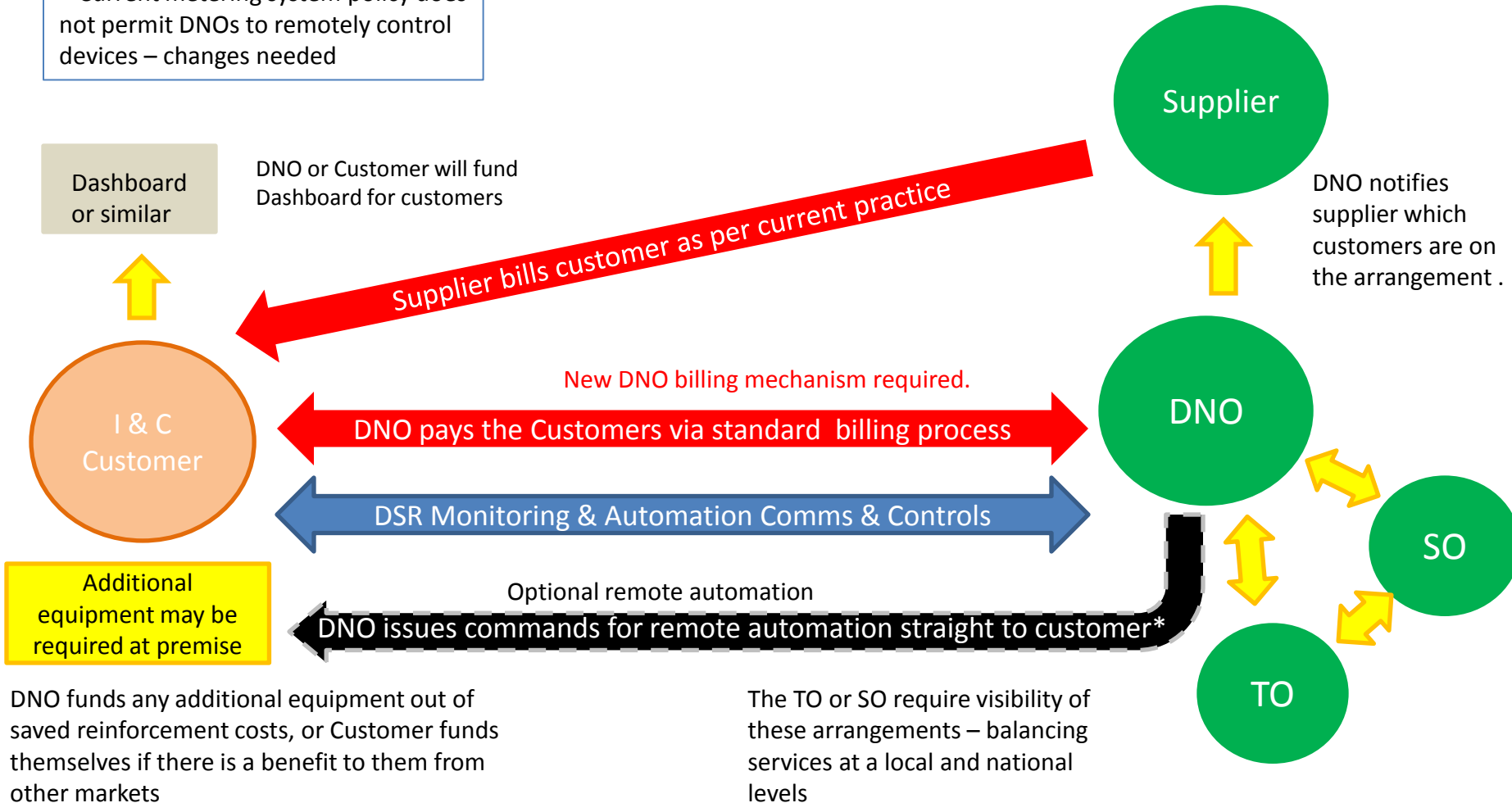
Supplier & DNO share engagement (or pay 3rd party) with customer and share responsibility for signing customer up and providing support

Restructuring of DUoS Charge via DNO

Barriers

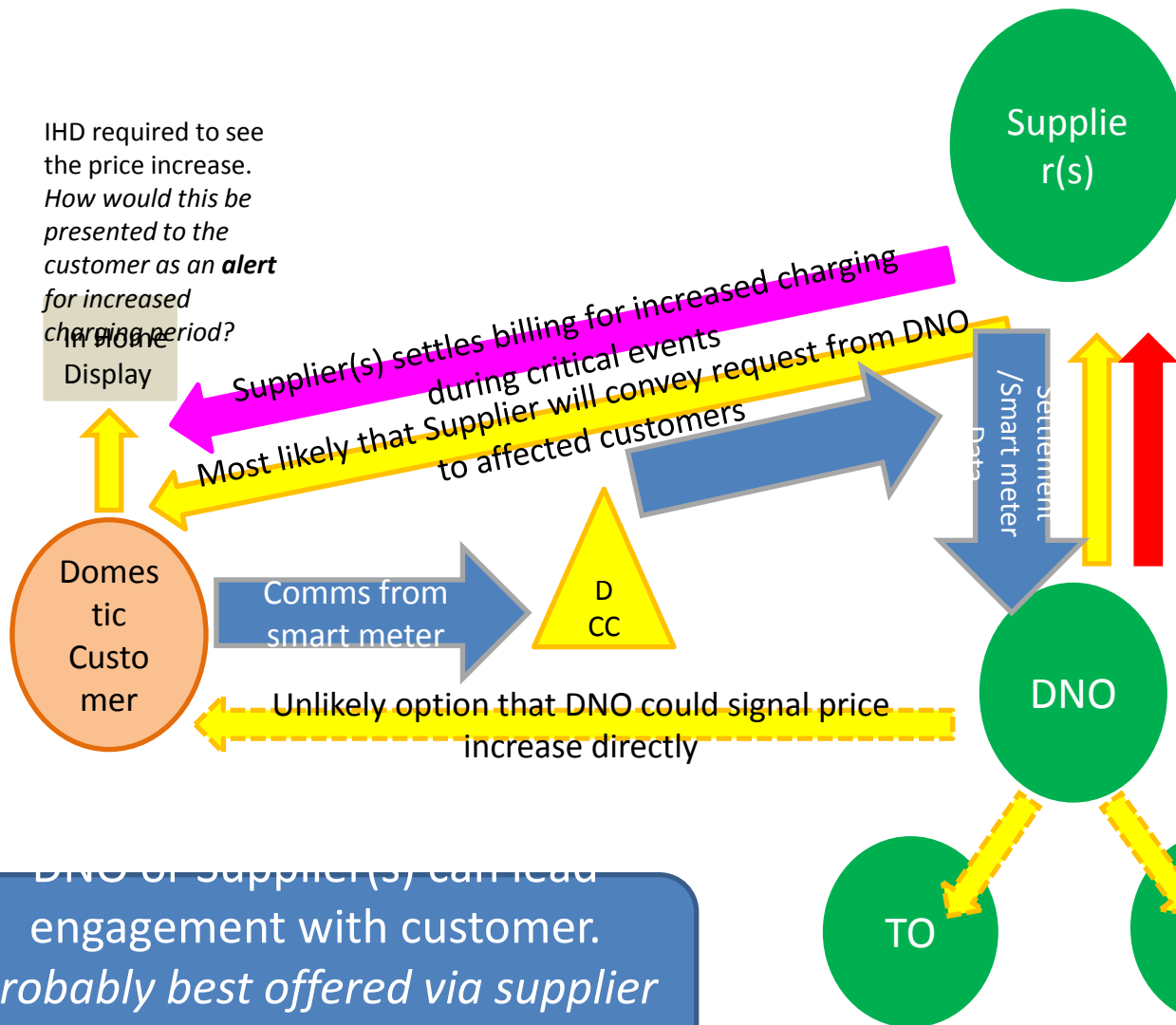
* Current metering system policy does not permit DNOs to remotely control devices – changes needed

Suppliers require visibility of when arrangement enacted for balancing mechanisms?



DNO leads engagement (or pays 3rd party) with customer and has responsibility for signing customer up and providing support

Critical event tariff without automation (11a)



IHD required to see the price increase. How would this be presented to the customer as an **alert** for increased charging period?

Display

DNO or supplier(s) can lead engagement with customer. Probably best offered via supplier due to existing resources & ...

Note; Options exist for the DNO to either signal directly or via the supplier(s). It is probably best suited to going via supplier unless there are more options that could be offered with the same equipment so as to offer value for sizable systems investment. Supplier systems likely to be in place to communicate with Smart Meters, IHDs and settle any billing. Additional complexity should be recognised, that while DNO, TO & TSO are exclusive there could be multiple suppliers within a specific locational DSR event.

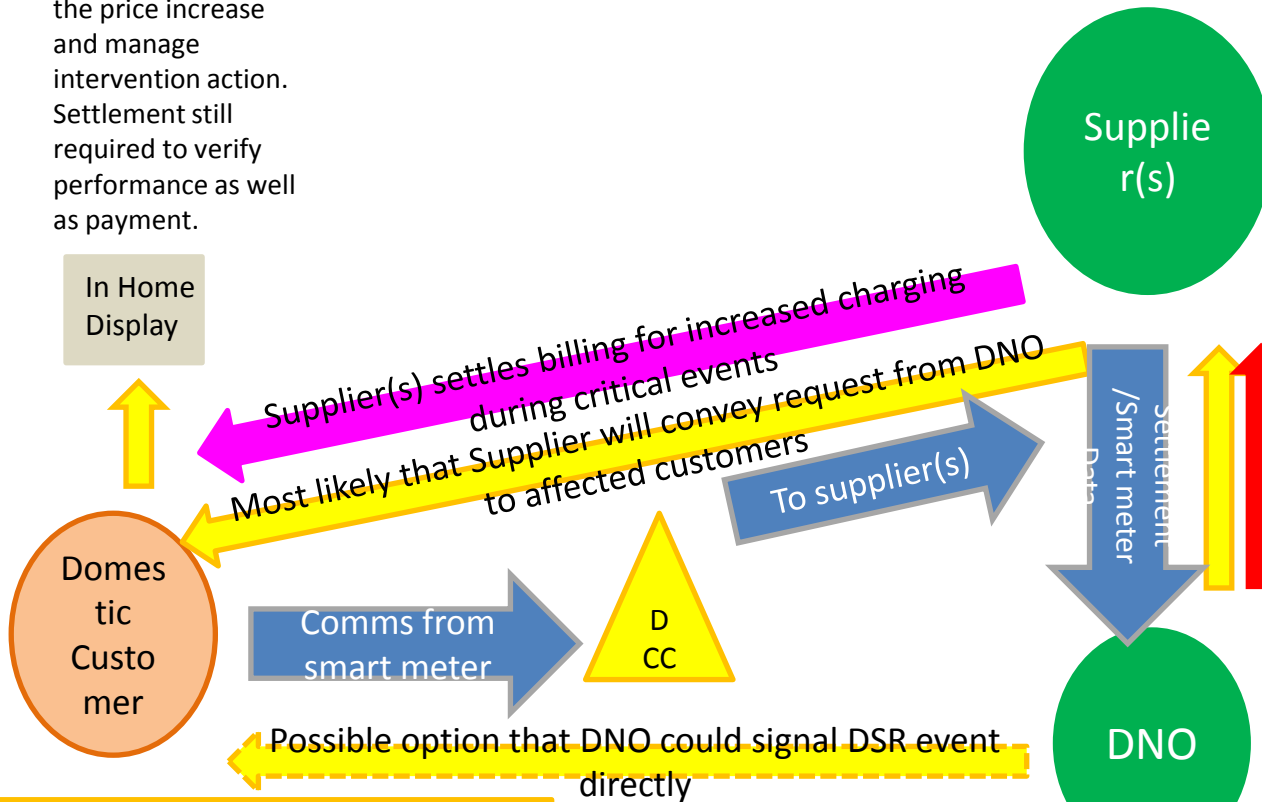
Note; Live network monitoring data from supplier is unlikely to be required. DNOs will monitor network level loads via control room systems.

As with other approaches, does the TO or TSO require any visibility of these arrangements and if so, what?

Critical event tariff with automation (11b)

IHD required to see the price increase and manage intervention action. Settlement still required to verify performance as well as payment.

In Home Display



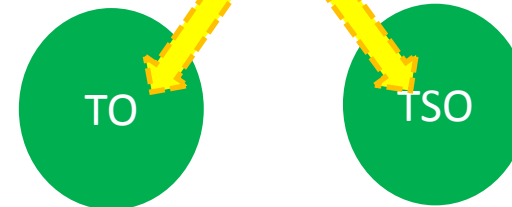
Note; Options exist for the DNO to either signal directly or via the supplier(s). In the event of direct intervention it is more viable for DNO to directly communicate the event. The suppliers more advanced systems and relationships do however still lend themselves to being the more effective route for performance validation and settlement.

Note; Live network monitoring data from supplier is unlikely to be required. DNOs will monitor network level loads via control room systems.

Is additional equipment necessary at premise?

DNO usage likely to be low, so utilising supplier justified equipment and offering contribution based on need is most practical option.

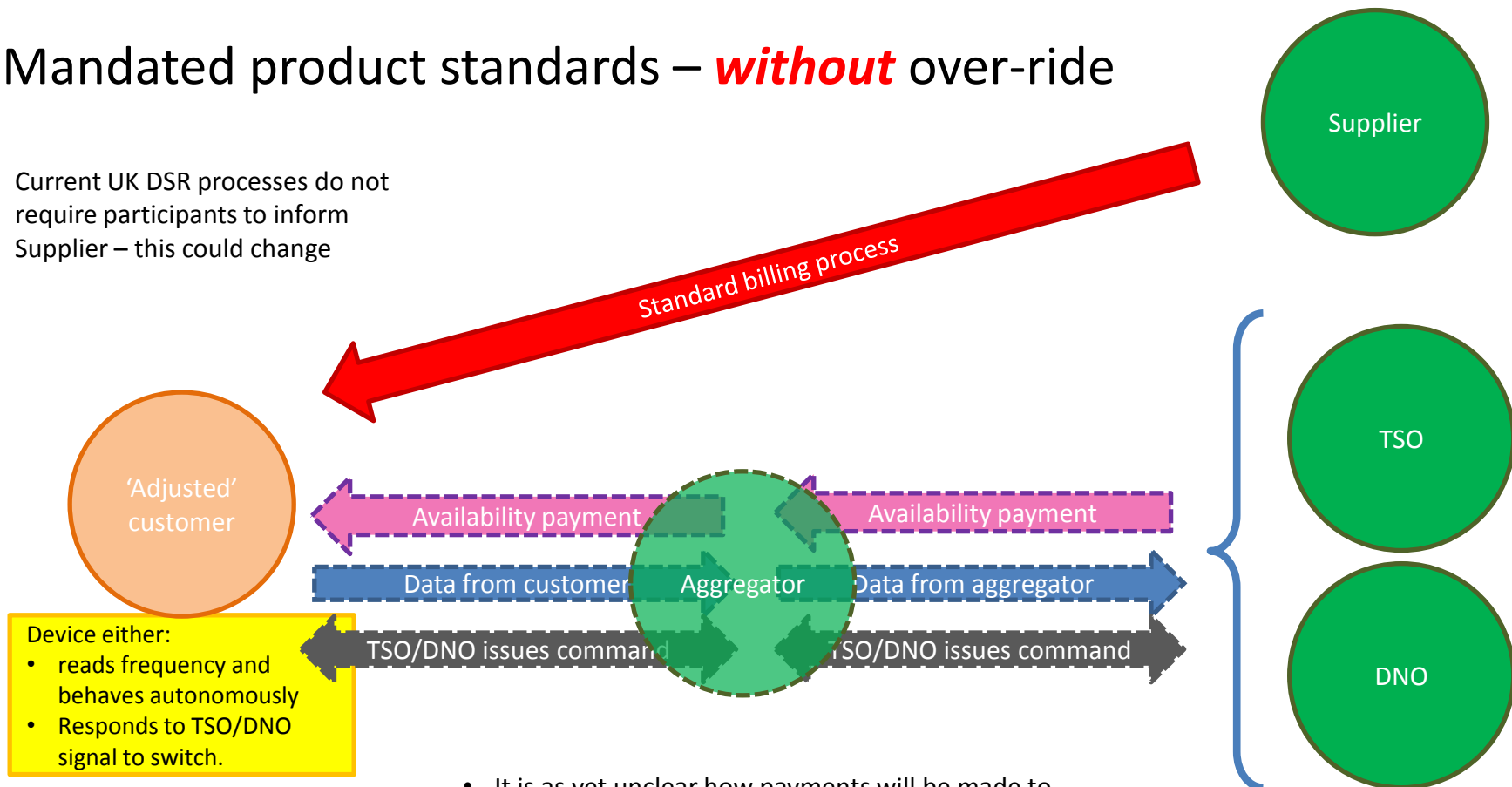
DNO or Supplier can lead engagement with customer. Probably best offered via supplier(s) due to existing resources & relationship.



As with other approaches, does the TO or TSO require any visibility of these arrangements and if so, what?

Mandated product standards – *without* over-ride

Current UK DSR processes do not require participants to inform Supplier – this could change



Device either:

- reads frequency and behaves autonomously
- Responds to TSO/DNO signal to switch.

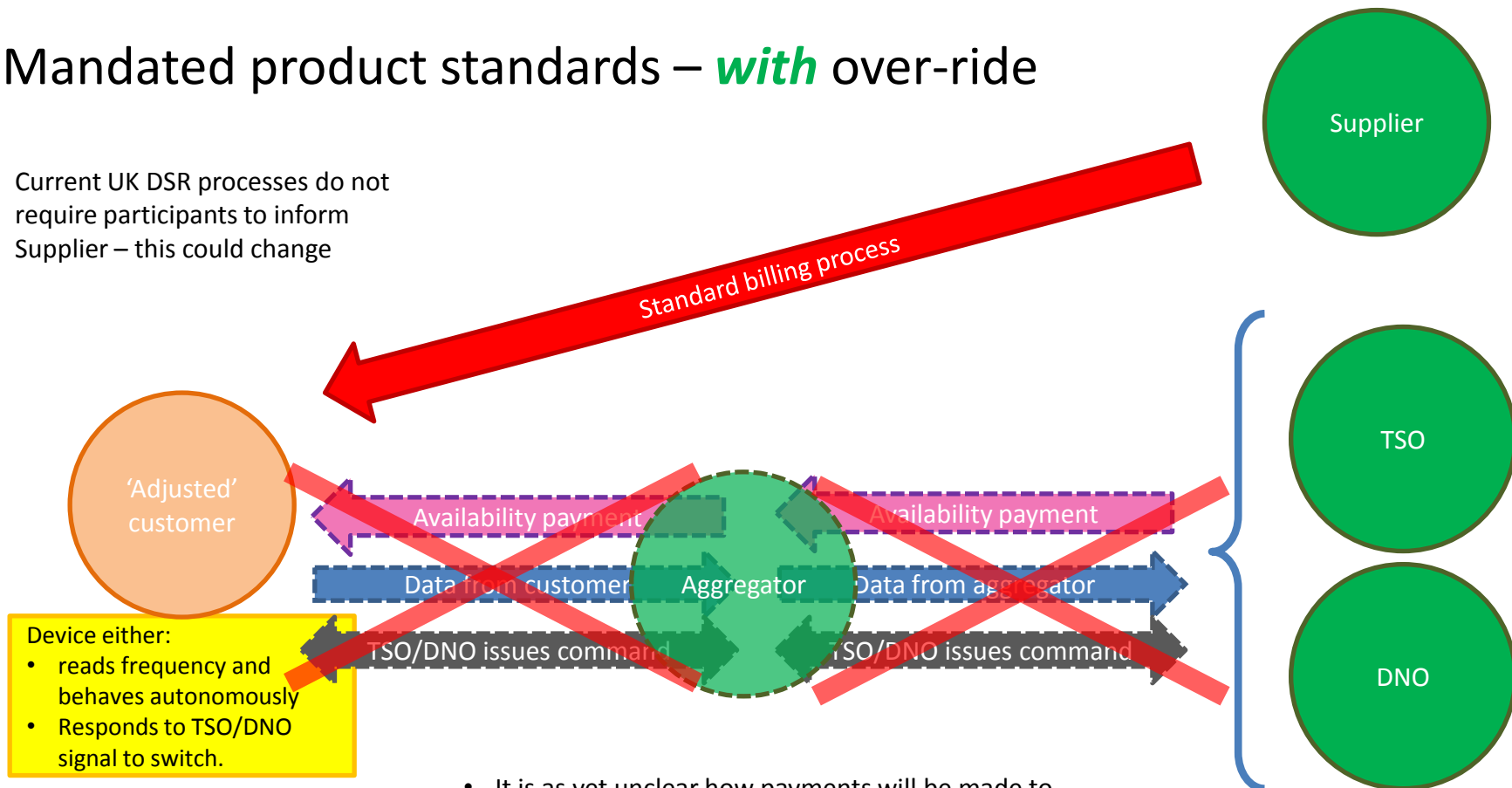
Autonomous FR equipment comes fitted to each new suitable appliance, domestic or otherwise

- It is as yet unclear how payments will be made to domestic customers for service from mandated products.
- Aggregators not strictly necessary but, like supply companies, can deal with customers facing and manage data.
- It is not yet clear how data from a mandated process will be gathered and held.

Market supplies suitable loads at 'device replacement rate'

Mandated product standards – *with* over-ride

Current UK DSR processes do not require participants to inform Supplier – this could change

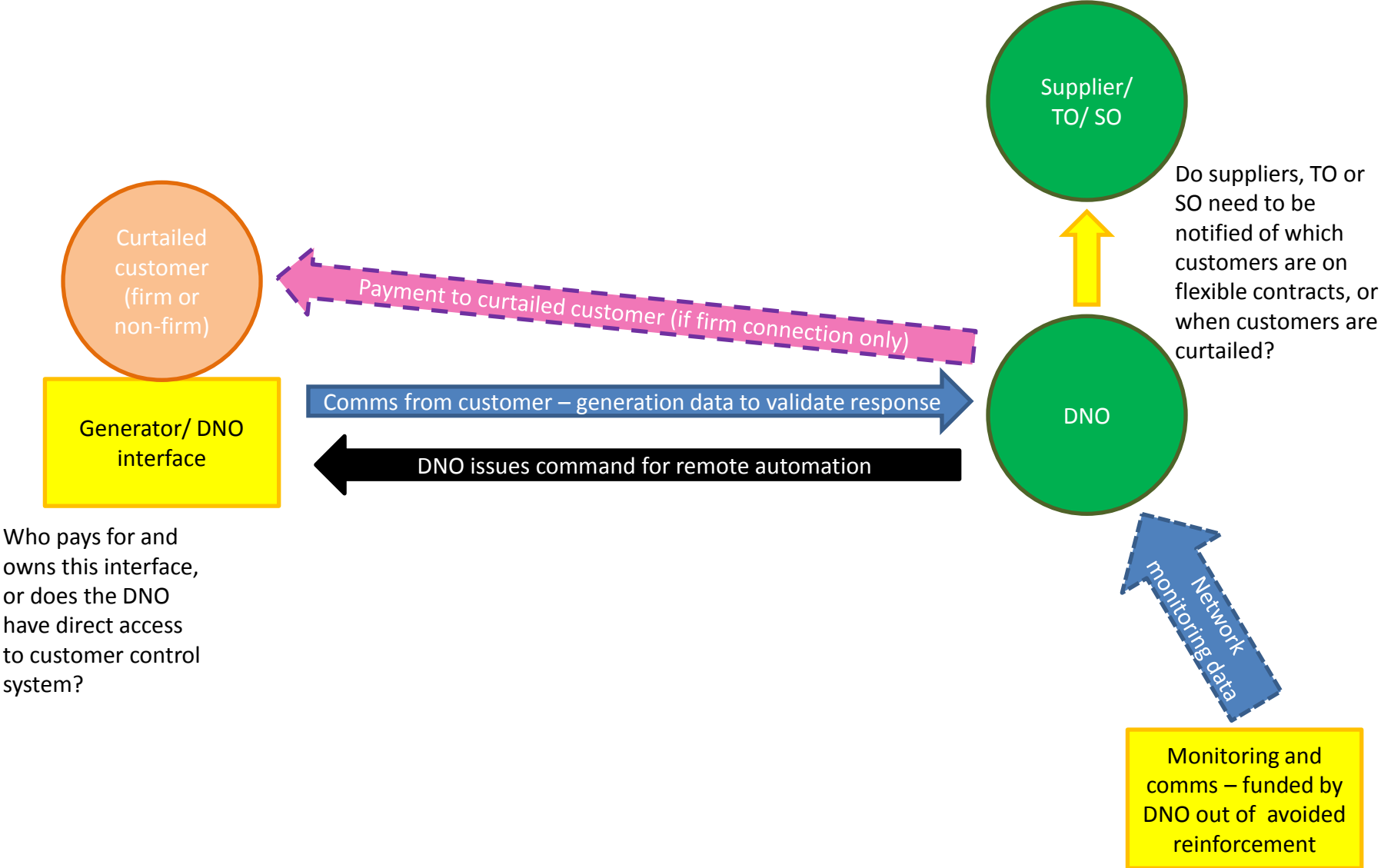


Autonomous FR equipment comes fitted to each new suitable appliance, domestic or otherwise

- It is as yet unclear how payments will be made to domestic customers for service from mandated products.
- Aggregators not strictly necessary but, like supply companies, can deal with customers facing and manage data.
- It is not yet clear how data from a mandated process will be gathered and held.

Market supplies suitable loads at 'device replacement rate'

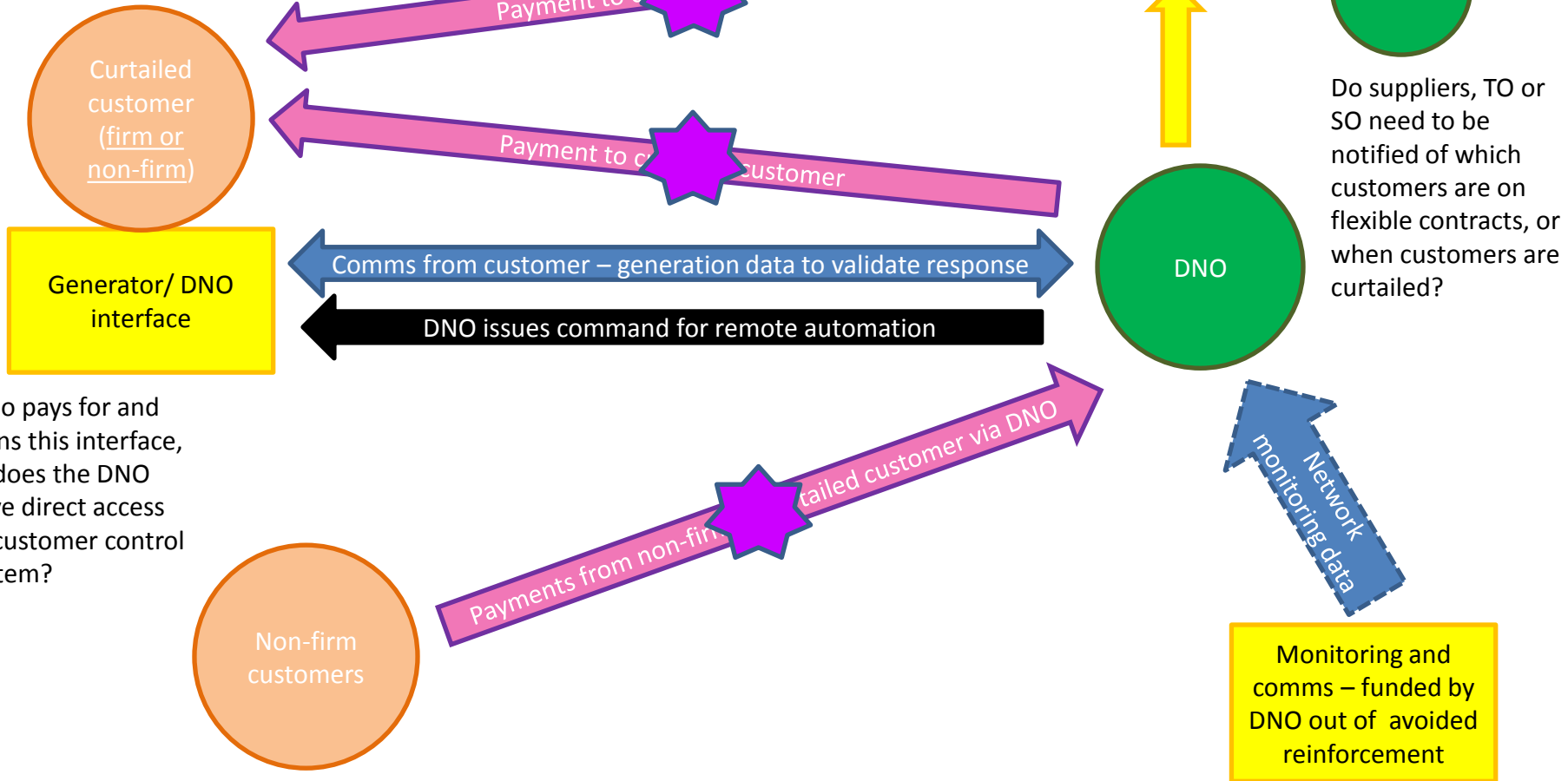
DRAFT EXAMPLE – PRO RATA/ LIFO/ DNO PARAMETER



DNO leads engagement with customer

DG option: commercially non-firm

All customers could be called off; non-firm customers provide the funds for compensation.



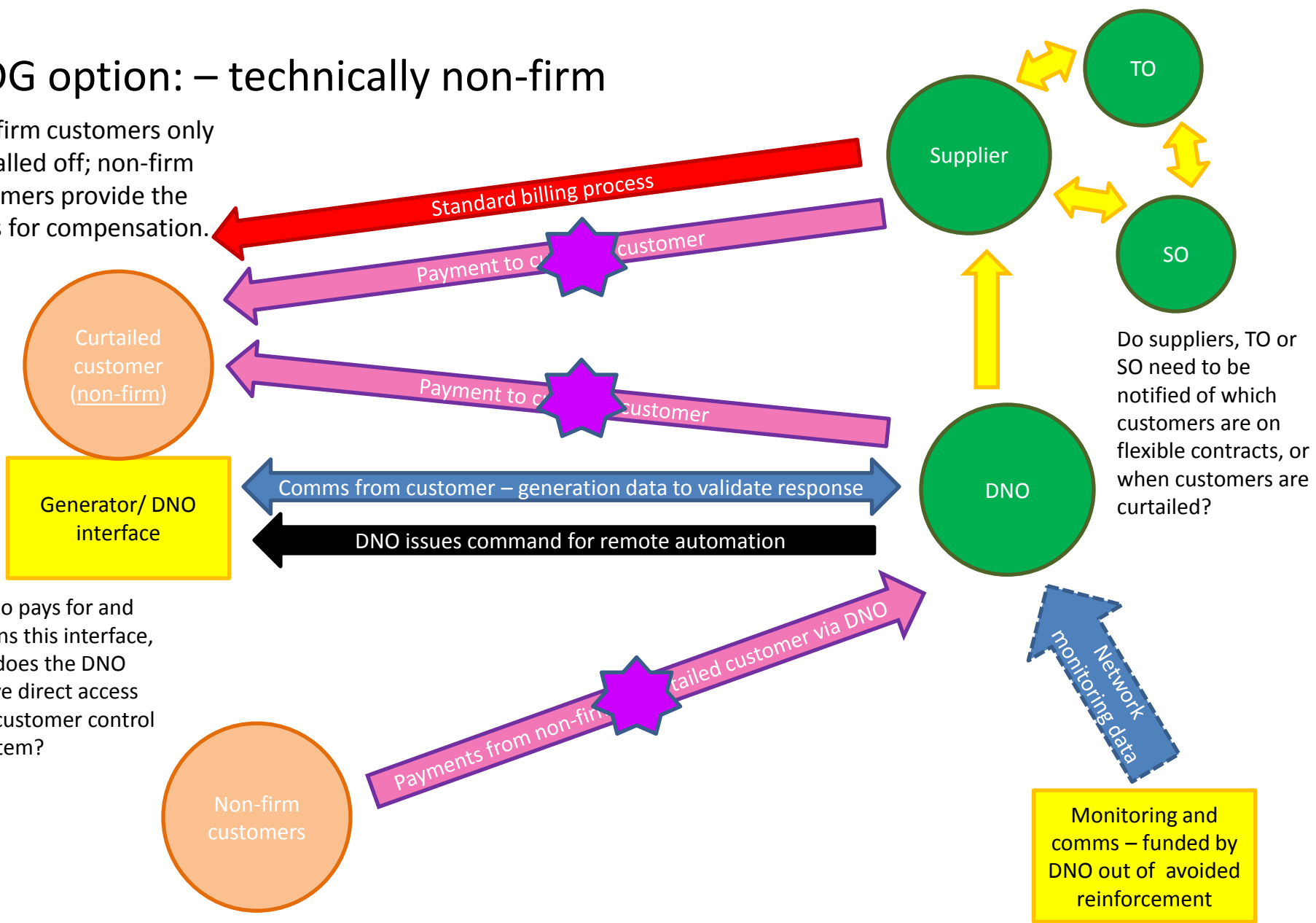
Do suppliers, TO or SO need to be notified of which customers are on flexible contracts, or when customers are curtailed?

Who pays for and owns this interface, or does the DNO have direct access to customer control system?

DNO leads engagement with customer and runs auction process (or pays third party to do this)

DG option: – technically non-firm

Non-firm customers only are called off; non-firm customers provide the funds for compensation.



DNO leads engagement with customer and runs auction process (or pays third party to do this)