



**FINAL DECISION**  
**Australian Gas Networks**  
**Access Arrangement**  
**2016 to 2021**

**Attachment 14 – Other**  
**incentive schemes**

May 2016

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## Note

This attachment forms part of the AER's final decision on the access arrangement for Australian Gas Networks South Australian distribution network for 2016–21. It should be read with all other parts of the final decision.

The final decision includes the following documents:

Overview

Attachment 1 - Services covered by the access arrangement

Attachment 2 - Capital base

Attachment 3 - Rate of return

Attachment 4 - Value of imputation credits

Attachment 5 - Regulatory depreciation

Attachment 6 - Capital expenditure

Attachment 7 - Operating expenditure

Attachment 8 - Corporate income tax

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Attachment 11 - Reference tariff variation mechanism

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## Shortened forms

Shortened form	Extended form
AA	Access Arrangement
AAI	Access Arrangement Information
AER	Australian Energy Regulator
AGN	Australian Gas Networks
ATO	Australian Tax Office
capex	capital expenditure
CAPM	capital asset pricing model
CCP	Consumer Challenge Panel
CESS	Capital Expenditure Sharing Scheme
CPI	consumer price index
CSIS	Customer Service Incentive Scheme
DRP	debt risk premium
EBSS	Efficiency Benefit Sharing Scheme
ECM	Efficiency Carryover Mechanism
ERP	equity risk premium
Expenditure Guideline	Expenditure Forecast Assessment Guideline
gamma	value of imputation credits
GSL	Guaranteed Service Level
MRP	market risk premium
NECF	National Energy Customer Framework
NERL	National Energy Retail Law
NERR	National Energy Retail Rules
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
NIS	Network Incentive Scheme
NPV	net present value
opex	operating expenditure
PFP	partial factor productivity
PPI	partial performance indicators

Shortened form	Extended form
PTRM	post-tax revenue model
RBA	Reserve Bank of Australia
RFM	roll forward model
RIN	regulatory information notice
RoLR	retailer of last resort
RPP	revenue and pricing principles
SLCAPM	Sharpe-Lintner capital asset pricing model
STPIS	Service Target Performance Incentive Scheme
TAB	tax asset base
UAFG	unaccounted for gas
WACC	weighted average cost of capital
WPI	Wage Price Index

## 14 Other incentive schemes

A full access arrangement may include (or we may require it to include) one or more incentive mechanisms to encourage efficiency in the provision of services by the service provider.

Attachment 9 to this final decision sets out our decision on the outcomes of the operating expenditure (opex) incentive scheme that has applied to AGN in the current access arrangement period, and how that scheme will apply in the 2016–21 access arrangement period.

This attachment sets out our final decision on AGN's proposal to add a new capital expenditure (capex) incentive scheme to its access arrangement.

### 14.1 Final decision

Our final decision is not to accept AGN's proposal to implement a Capital Expenditure Sharing Scheme (CESS) in the 2016–21 access arrangement period. We recognise the potential benefits of a CESS. However, for the reasons set out in this attachment and in our draft decision<sup>1</sup> we remain concerned that the addition of a CESS to AGN's access arrangement has the potential to create an overall imbalance in incentives under its access arrangement. This could undermine incentives for efficient investment in AGN's network, and potentially incentivise underinvestment.<sup>2</sup> Such an outcome would not promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas. We consider these issues require further consideration and consultation to ensure the suitability of the scheme for gas.

As we have not approved the AGN's proposed CESS, we have instead proposed revisions to its proposed access arrangement to remove it.<sup>3</sup>

We have formulated our revisions with regard to the matters the NGL require an access arrangement to include, to AGN's proposal and to our reasons for not approving that proposal.<sup>4</sup>

We have made all revisions necessary to AGN's revised proposed access arrangement to give effect to this final decision. These revisions can be found in clause 5.2 of the *Approved Access Arrangement for AGN's South Australian Gas Distribution*

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<sup>1</sup> AER, *Draft decision Australian Gas Networks access arrangement, Attachment 14 - Other incentive schemes*, November 2015.

<sup>2</sup> NGL, ss. 24(3), (6).

<sup>3</sup> NGR, r. 64(1).

<sup>4</sup> NGR, r. 64(2).

*Network 1 July 2016–30 June 2021, April 2016*, which was released with this final decision and will take effect from 1 July 2016.<sup>5</sup>

## 14.2 AER's assessment approach

A full access arrangement may include (or we may require it to include) one or more incentive mechanisms to encourage efficiency in the provision of services by the service provider. Incentive mechanisms may provide for carrying over increments for efficiency gains, or decrements for efficiency losses, from one access arrangement period into the next. An incentive mechanism must be consistent with the revenue and pricing principles (RPPs).<sup>6</sup>

The RPPs include that a service provider should be provided with effective incentives in order to promote economic efficiency with respect to reference services the service provider provides. The economic efficiency that should be promoted includes:<sup>7</sup>

- efficient investment in, or in connection with, a pipeline with which the service provider provides reference services; and
- the efficient provision of pipeline services; and
- the efficient use of the pipeline.

The RPPs also require that regard should be had to the economic costs and risks of the potential for under and over investment by a service provider in, or for under or over utilisation of, the pipeline with which the service provider provides pipeline services.<sup>8</sup> For this reason, incentive schemes are best developed and implemented in the context of the access arrangement as a whole, and in conjunction with consideration of related forecasting methodologies and complementary incentives, including but not limited to other incentive schemes.

In considering these principles, we are guided by the National Gas Objective (NGO) to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

The NGO and RPPs do not *require* the introduction of an incentive scheme (or schemes): they look to the incentives that apply under the access arrangement as a whole. As we discuss below in section 14.2.1, incentive mechanisms are only one of the ways in which the NGL and NGR allow us to manage incentives under an access arrangement. To satisfy the NGO and RPPs, an incentive mechanism must work in conjunction with other incentives to achieve the desired result.

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<sup>5</sup> NGR, r. 64(4).

<sup>6</sup> NGR, r. 98.

<sup>7</sup> NGL, s. 24(3).

<sup>8</sup> NGL, ss. 24(6), (7).



Under the NGR we have full discretion in our decision to approve or reject the inclusion of an incentive mechanism in an access arrangement. This means that we can withhold our approval of AGN's proposed incentive mechanisms if, in our opinion, a preferable alternative to AGN's proposal exists that complies with the applicable requirements of the NGL and is consistent with the applicable criteria (if any) prescribed by the NGL. The preferable alternative could be a different mechanism to the one proposed (see, for example, our draft decision on the opex efficiency carryover mechanism AGN originally proposed). It could also be that no incentive mechanism would be applied.

### 14.2.1 Interrelationships

The building block approach to determining the forecast revenue requirement creates a number of incentives under the access arrangement. For example, the NGR allow AGN to retain the full value of its approved capex forecast, including any amount it saves through more efficient delivery of its capex program, until the end of the access arrangement period. In addition, we review the capex AGN actually spends at the end of the period so that only conforming capex is rolled into its capital base. Also, as an alternative energy source, gas networks must compete with electricity. This creates further incentives to remain cost efficient, and competitive in price and the quality of service.

In addition to these incentives, the NGR allow, but do not require, the inclusion of one or more incentive mechanisms in an access arrangement where this is consistent with the RPPs.<sup>9</sup>

Incentive mechanisms do not operate in isolation. They must work in conjunction with the existing incentives provided to the service provider, both under the access arrangement and more generally. Where an incentive mechanism does not do this, it may in fact incentivise inefficient or imprudent behaviour by a service provider, to the detriment of the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas.

First, the extent to which an incentive mechanism contributes to the NGO and is consistent with the RPPs is necessarily a function of the forecasting approach used for related expenditure. Businesses should be rewarded (penalised) for genuine efficiency gains (losses) rather than receive windfall rewards or penalties due to forecasting error. An incentive mechanism therefore needs to be designed with regard to the forecasting approaches applied.

Second, to contribute to the NGO and be consistent with the RPPs, an incentive scheme must maintain balance between competing incentives under the access arrangement. For example, a CESS could strengthen incentives to outperform approved capex forecasts, and balance a service provider's incentives to do so across

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<sup>9</sup> NGR, r. 98.

the access arrangement period. As a complement to the opex efficiency carryover mechanisms that have applied in gas for some time, it can also balance incentives to choose capex solutions over opex to maximise carryover amounts under the ECM.

However, without a complementary incentive to maintain the quality, safety, reliability and security of supply of natural gas, a CESS may create financial incentives for service providers to reduce capex in a way that could put the safe and reliable operation of the network at risk.

The CESS that applies under the NER is balanced by a Service Target Performance Incentive Scheme (STPIS), which provides a balancing financial incentive to maintain or improve performance against pre-defined network reliability targets, in the form of positive or negative adjustments to allowable revenue. There is no comparable balancing financial incentive in the regulatory framework that applies to AGN or in its current or proposed access arrangements.

### 14.3 AGN's revised proposal

In its July 2015 proposal, AGN proposed three new incentive schemes: the CESS, a customer service incentive scheme (CSIS) and a network innovation scheme (NIS). Our draft decision did not approve these schemes.

In its revised proposal, AGN did not pursue the CSIS and NIS.

The revised proposal focusses instead on the introduction of a CESS. AGN's arguments for the introduction of a CESS are largely the same as those in its original proposal. However, its revised proposal replaces the CESS set out in its original proposal with the CESS that we consulted on and developed for electricity network services providers under the NER as part of our Better Regulation program.

### 14.4 Reasons for final decision

AGN's revised proposal reiterated the potential benefits from the application of a CESS it identified in its original proposal. At a high level, AGN submitted that:

1. best practice incentive regulation should be focussed on providing the right incentives to reveal efficient outcomes<sup>10</sup>
2. the combination of the EBSS and the CESS provide the correct incentives in order for AGN to incur the most efficient form of expenditure (opex or capex)<sup>11</sup>
3. the CESS provides the appropriate incentive to continually seek capex efficiencies throughout the access arrangement period, which would otherwise decline over the period.<sup>12</sup>

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<sup>10</sup> AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, Attachment 12.1 Incentive Arrangements*, January 2016, p. 7.

<sup>11</sup> AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, Attachment 12.1 Incentive Arrangements*, January 2016, p. 9.

We recognised these potential benefits in our draft decision.

Through a report AGN commissioned from Houston Kemp, AGN submitted that our decision not to apply a CESS to capex in AGN's next access arrangement period "has the effect of diminishing, or undermining, the incentive for AGN to improve the efficiency of its capex".<sup>13</sup> Houston Kemp "[understood] from AGN's Revised Proposal that the AER's decision not to apply a CESS to capex in the next access arrangement period gives rise to incentive arrangements that will not promote productive efficiency, ie the efficient investment in and operation of natural gas services for the long term interests of consumers".<sup>14</sup> Houston Kemp concluded that "if the Final Decision replicates the Draft Decision by not applying the CESS to capex in the next access arrangement period, the Final Decision will not meet the NGO requirement".<sup>15</sup>

As we noted above in section 14.2, neither the RPPs nor the NGO require the inclusion of incentive mechanisms in an access arrangement. Introducing a CESS may strengthen existing incentives. However, it does not always follow that existing incentives *need* to be strengthened, or that not introducing a CESS would diminish or undermine existing incentives.

On the contrary, we consider existing incentives may be undermined or diminished if a CESS was implemented without proper regard to how it would impact incentives under the access arrangement as a whole.

To this end, our draft decision set out a number of concerns with AGN's proposal to add a CESS to its 2016–21 access arrangement that were not adequately addressed in AGN's original proposal. We suggested that these matters were better addressed through further consultation, including an examination of other incentive mechanisms and of capex forecasting methodologies for gas.<sup>16</sup> A number of stakeholder submissions on the draft decision and revised proposal supported this position.<sup>17</sup>

In its revised proposal, AGN replaced the CESS it originally proposed with the electricity incentive scheme we developed under the NER as part of our Better Regulation program in 2013. AGN argued that "sufficient industry consultation has occurred for the CESS applied in electricity to also apply in gas".<sup>18</sup>

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<sup>12</sup> AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, Attachment 12.1 Incentive Arrangements*, January 2016, p. 9.

<sup>13</sup> HoustonKemp, *Australian Gas Networks - AER gas price review*, 4 February 2016, p. 42.

<sup>14</sup> HoustonKemp, *Australian Gas Networks - AER gas price review*, 4 February 2016, p. 42.

<sup>15</sup> HoustonKemp, *Australian Gas Networks - AER gas price review*, 4 February 2016, p. 42.

<sup>16</sup> AER, *Draft decision Australian Gas Networks access arrangement, Attachment 14 - Other incentive schemes*, November 2015.

<sup>17</sup> See, for example: SACOSS, *Submission to the AER in Response to AGN's Revised Regulatory Proposal for the 2016 - 2021 Access Arrangements*, February 2016, p. 7; Consumer Challenge Panel, *Supplementary advice to AER from Consumer Challenge Panel sub-panel 8 - AGN*, 31 March 2016, p. 6; Government of South Australia, *AGN Access Arrangement - submission to Draft Decision and Revised Proposal*, 24 February 2016; Uniting Care Australia, *Submission to AER - AGN SA Access Arrangement 2016-21*, Draft decision, March 2016, pp. 6-7.

<sup>18</sup> AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, Attachment 12.1 Incentive Arrangements*, January 2016, p. 9.

In support of its argument that we could rely on the consultation we had undertaken on the NER CESS to justify its application to AGN under the NGR, AGN's revised proposal pointed to our use of an EBSS and revealed cost (base-step-trend) opex forecasting in both electricity and gas as an example of our relying on our consultation through the Better Regulation program to apply tools developed for electricity to gas.<sup>19</sup> However, this argument does not recognise that opex incentive schemes have been used in gas distribution access arrangements, including AGN's, for some time. These opex incentive mechanisms are a necessary complement to our revealed cost approach to opex forecasting, which has also been used in the assessment of gas access arrangements for some time.

AGN is correct insofar as our draft decision favoured the approaches used in our Better Regulation guidelines in respect of opex assessment approaches and the opex efficiency carryover mechanism.<sup>20</sup> However, it is not correct in implying that either element of our draft decision was new to gas or implemented solely on the basis of an electricity-focussed consultation.<sup>21</sup> While we looked at both these tools as part of our Better Regulation program, the changes attributable to that program were an evolution of tools that were already common to electricity and gas, rather than introduction of something new to either.

AGN's revised proposal noted, correctly, that the NGO and NEO are essentially the same, as are the RPPs for gas and electricity. We also use a building block approach to determine revenue for both. However, there are differences between the assessment approaches we use for gas and electricity capex. There are also differences in the incentives that apply to gas and electricity network service providers, including additional incentive schemes, such as the STPIS, that apply under the NER but not the NGR. These differences mean that common approaches to between gas and electricity will not always be appropriate. We do not consider our previous consultation on the development and implementation of a CESS for electricity adequately addresses the concerns raised in our draft decision.

First, as we noted above, there are differences between the capex assessment and forecasting toolkits we use for electricity and gas. These differences were not considered by AGN in its original or revised proposals, or as part of our Better Regulation consultation on the CESS for electricity.

The link between an expenditure incentive and the associated forecasting methodology is reflected in how we designed and introduced the CESS for electricity. That is, the electricity CESS was developed in conjunction with an extensive refinement of our electricity forecasting toolkit as part of the Better Regulation program. We consider it

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<sup>19</sup> AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, Attachment 12.1 Incentive Arrangements*, January 2016, p. 3.

<sup>20</sup> AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, Attachment 12.1 Incentive Arrangements*, January 2016, p. 3.

<sup>21</sup> AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, Attachment 12.1 Incentive Arrangements*, January 2016, p. 4.

preferable that both elements of the gas framework be assessed together before changes are implemented, rather than considering the CESS in isolation. In this way, we can ensure that a CESS that was designed for compatibility with our electricity capex assessment tools does not produce unintended outcomes under an access arrangement that may not be in the long term interests of consumers.

For example, SACOSS notes in its submission on the draft decision and revised proposal that:<sup>22</sup>

The gas industry differs significantly in its degree of capital intensity to the electricity industry, with a far higher ratio of capital to operating cost. Decisions in the gas transmission and distribution chain about unit rates and the required degree of capital replacement and augmentation are much more significant than in the electricity transmission and distribution chain. Errors about appropriate unit rates have much greater potential to deliver windfall profits (or losses) than in the electricity industry. This makes further consultation and assessment of benchmark unit rates the preferred approach to adoption of a CESS at this time.

SACOSS also expressed concern that:<sup>23</sup>

If the unit rates approved for capital spending are above efficient levels, then the CESS could increase the existing incentive properties of the regulatory regime to overstate the required capital budget for the forthcoming access arrangement period.

Second, our draft decision raised the lack of balancing incentives to a CESS in AGN's access arrangement relative to those that inform our electricity determinations under the NER. An access arrangement will best contribute to the NGO when the incentives under the access arrangement are balanced to drive optimal behaviour. Origin Energy recognised this in its submission on the draft decision and revised proposal, noting that:<sup>24</sup>

...a regulatory framework should consist of multiple mechanisms that are sufficiently synchronised to ensure a correct balance of incentives and penalties. It is imperative that the AER has confidence that each of its incentive regimes will operate in tandem and deliver long-term intended outcomes. Failure to have a complete set of instruments creates opportunities for gaming or unintended consequences.

The introduction of a CESS would change the balance of incentives under AGN's access arrangement. In this respect the STPIS is a key component of our electricity determinations. Its absence in gas is one of the key differences between the electricity

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<sup>22</sup> SACOSS, *Submission to the AER in Response to AGN's Revised Regulatory Proposal for the 2016 - 2021 Access Arrangements*, February 2016, p. 7.

<sup>23</sup> SACOSS, *Submission to the AER in Response to AGN's Revised Regulatory Proposal for the 2016 - 2021 Access Arrangements*, February 2016, pp. 7–8.

<sup>24</sup> Origin Energy, *Submission on AGN Revised Access Arrangement*, 4 February 2016, p. 3.

and gas frameworks that AGN's original and revised proposals have not adequately addressed.

In its revised proposal, AGN suggested that:<sup>25</sup>

- ESCOSA's decision to publicly report on AGN's network performance from 2016-17 will allow us to quickly determine if safety and reliability are being compromised by AGN in order to maximise a CESS reward.
- Failure to meet obligations under AGN's distribution licence would put that licence at risk, or at least have customers disconnect from the network due to it being unreliable and unsafe.

AGN submitted that its obligation to report to ESCOSA and the South Australian Office of the Technical Regulator (OTR), whose role it is to ensure AGN is meeting its obligations, constitutes "a quantifiable, independent scheme...by which AGN's safety and reliability performance can be measured".<sup>26</sup>

We do not consider the licensing and reporting frameworks AGN has identified have the same balancing properties of the STPIS. Electricity network service providers are subject to a STPIS *in addition to* such measures. The STPIS provides a direct link between changes in network performance and regulated revenues, which the licensing and performance reporting frameworks do not.

In electricity, the STPIS balances the incentives the CESS creates to reduce capex with a financial incentive to maintain or improve on the performance levels funded through the approved forecast revenue requirement. By putting revenue at risk where performance falls below pre-defined targets, the STPIS discourages a business from seeking to maximise benefits from the CESS by reducing capex at the expense of the reliability, safety and security of its network. The Customer Service Incentive Scheme that AGN put forward in its original proposal, while it would have put revenue at risk, was not a network reliability scheme that is comparable to the STPIS.

This concern was echoed in submissions from the CCP and the South Australian Government on the draft decision and revised proposal:

Having considered the AER's [draft decision], and the counter arguments put by AGN in the [revised access arrangement proposal], [the CCP] are persuaded that the lack of standard service reliability measures and the need for additional stakeholder consultation mean that it would be premature to introduce a CESS for the next AA period.<sup>27</sup>

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<sup>25</sup> AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, Attachment 12.1 Incentive Arrangements*, January 2016, p. 6.

<sup>26</sup> AGN, *Revised Access Arrangement Information for AGN's SA Natural Gas Distribution Network, Attachment 12.1 Incentive Arrangement*, January 2016, p. 5.

<sup>27</sup> Consumer Challenge Panel, *Supplementary advice to AER from Consumer Challenge Panel sub-panel 8 - AGN*, 31 March 2016, pp. 5–6.



Until there is a complementary scheme of providing incentives for maintaining or improving reliability levels, such as the STPIS which applies for electricity, there is a greater risk that achieving capital expenditure underspends through an incentive mechanism may undermine network reliability and safety. Noting that the Essential Services Commission of South Australia has determined to not set binding service reliability standards for AGN's 2016–21 period, but will be monitoring and publicly reporting on AGN's performance, it is critical that any CESS needs to be introduced alongside quantifiable service reliability measures with appropriate time series measurable data.<sup>28</sup>

We recognise the potential benefits of a CESS. However, as discussed above we remain concerned that the addition of a CESS to AGN's access arrangement has the potential to create an overall imbalance in incentives under its access arrangement. This could undermine incentives for efficient investment in AGN's network, and potentially incentivise underinvestment.<sup>29</sup> Such an outcome would not promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas. We consider these issues require further consideration and consultation to ensure the suitability of the scheme for gas.

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<sup>28</sup> Government of South Australia, *AGN Access Arrangement - submission to Draft Decision and Revised Proposal*, 24 February 2016, p. 3.

<sup>29</sup> NGL, ss. 24(3), (6).