

Investigation into Compliance Barriers

Implementation of the NSW Non-Urban Water Metering Framework Tranche 1

NSW Irrigators' Council, August 2021

Phone: (02) 9264 3848

Sydney, NSW, Australia

Contents

Contents	2
NSW Irrigators' Council	3
Executive Summary	4
Background	5
Metering Policy	5
Introduction	6
Main findings:.....	8
Recommendations	9
PART ONE: BARRIERS TO COMPLIANCE	10
Barriers to compliance	10
Methodology	10
DQP Survey.....	10
Interviews.....	10
Additional resources:	11
Findings of Barriers	11
Supply issues and market deficiencies.....	11
Accessibility & Availability of DQPs.....	13
Telemetry	15
DQP Portal.....	16
Communication of policy to water users	17
Administration & Implementation.....	18
Cost	19
Water availability	21
Risks if barriers not addressed	22
NRAR's enforcement position	23
Government awareness of barriers	24
Cost of mismanaged and delayed policy implementation.....	25
Emerging issues.....	28
Submersible pumps and LID in coastal valleys	28
PART TWO: COMPLIANCE REPORTING	29
NRAR Compliance Status Reports:	29
NRAR status report, 5 March 2021	29
NRAR report, 22 April 2021.....	31

NRAR report, 13 July 2021	33
Inconsistencies in NRAR reporting approach.....	35
Media strategy and communications	36
Conclusion	38
Appendix 1: Letters by Industry Raising Issues	39

NSW Irrigators' Council

The NSW Irrigators' Council (NSWIC) is the peak body representing irrigation farmers and the irrigation farming industry in NSW. NSWIC has member organisations in every inland valley, and several coastal valleys. Through our members, NSWIC represents more than 12,000 water licence holders who access regulated and unregulated surface water systems, and groundwater systems. NSWIC's member organisations include valley water user associations, food and fibre groups, irrigation corporations and commodity groups from the rice, cotton, and horticultural industries.

Executive Summary

This report investigates the implementation and administration of the NSW Non-Urban Water Metering Policy (herein, Metering Policy), particularly focusing on barriers to compliance for Tranche 1.

The **key finding** is that barriers to achieving full compliance beyond the control of water users are preventing, or at best significantly delaying, policy implementation – due to administration and technical failures in implementation. These barriers are found to be the result of the Department of Planning, Industry and Environment-Water (DPIE-Water) and WaterNSW failing to execute their responsibilities effectively, including failing to address the implementation barriers reported by the industry since the conception of the Metering Policy.

The report provides a **suite of recommendations**, including: an independent review into the implementation and administration of the Metering Policy; urgent identification and resolution of the barriers to compliance; and an immediate pathway forward for water users unable to comply due to administrative and technical failures.

Whilst the industry wants the reform to meet its timeframes, it is looking inevitable that decision-makers may need to consider all options if DPIE-Water and WaterNSW cannot resolve the barriers to compliance in time. The rollout will only get more challenging, with an estimated 3200 irrigators with about 7500-8000 smaller works in the northern inland valleys in Tranche 2 who need meters compliant with the new standard to be installed and validated by 1 December 2021, just 13 weeks away. A similar number of water users and works in southern inland valleys will then need to comply by 1 December 2022, and then another estimated 2390 with more than around 6000 works in coastal valleys by 1 December 2023¹. The need to act on these administration and technical barriers is urgent, to avoid policy failure in later tranches.

The report also provides recommendations to improve **compliance reporting** by the Natural Resources Access Regulator (NRAR) - particularly the accuracy, transparency, and consistency – following status reports to date that have been inconsistent and included non-verified data. A key finding is that contrary to initial NRAR reports of 45% non-compliance by Tranche 1 water users, data shows this number is **actually 5%**, with the status of 36% considered ‘unknown’, and a further 32% considered ‘out of scope’.

The purpose of this report is not to provide excuses for water users, but to document legitimate barriers to compliance resulting from policy implementation, administration and technical failures, with the objective of overcoming these barriers to ensure the Metering Policy is deliverable, effective, and implemented in as timely fashion as feasible.

From the outset, it must be emphasised that the NSW irrigation industry supports continual improvements to metering, monitoring and measurement of water use; supports sustainable limits on water use; and has zero tolerance for non-compliance with water laws. These report findings are as disappointing to us, as they no doubt will be to others, and requires urgent attention.

¹ DPIE-Water Industry Guide - Works requiring a meter, June 2020. Water users assumed to have an average two to three works each. [Industry Guide – Works Requiring a Meter \(nsw.gov.au\)](https://www.nsw.gov.au/industry-guide-works-requiring-a-meter)

Background

Metering Policy

The NSW Non-Urban Water Metering Policy² is a robust new metering framework designed to upgrade all meters above 100mm to a new gold standard and widen coverage of non-urban water meters in NSW. The Metering Policy arose following the NSW Government's Water Reform Action Plan (WRAP) in December 2017, in response to the 2017 *Independent investigation into NSW water management and compliance*³ (Matthews Inquiry) and *Murray–Darling Basin Water Compliance Review*⁴.

The objectives of the Metering Policy are that:

- “the vast majority of licensed water take is accurately metered;
- meters are accurate, tamperproof and auditable;
- undue costs on smaller water users are minimised;
- metering requirements are practical and can be implemented effectively.⁵

The Metering Policy is being rolled out over a five-year period. Tranche 1 is water users with surface water pumps 500mm and above (the largest users). Tranche 1 was required to have compliant metering equipment by 1 December 2020.⁶

Figure 1: Timeframe for rollout of the Metering Policy



The Metering Policy requires irrigators to replace their existing meters with meters compliant with the Australian Standard (AS4747) or prove their existing meters meet the standard. AS4747 is a gold standard recognised globally as the world's highest standard. All new and replacement meters must be pattern-approved, installed

² https://www.industry.nsw.gov.au/__data/assets/pdf_file/0017/312335/nsw-non-urban-water-metering-policy.pdf

³ https://www.industry.nsw.gov.au/__data/assets/pdf_file/0019/131905/Matthews-final-report-NSW-water-management-and-compliance.pdf

⁴ <https://www.mdba.gov.au/sites/default/files/pubs/MDB-Compliance-Review-Final-Report.pdf>

⁵ https://www.industry.nsw.gov.au/__data/assets/pdf_file/0017/312335/nsw-non-urban-water-metering-policy.pdf

⁶ Note: This timeframe was initially December 2019, however, an extension was provided due to a range of factors.

by a Duly Qualified Person (DQP), have a Local Intelligence Device (LID) and tamper-evident seals. All surface water works (except pumps less than 200mm) are required to have LIDs installed and connected to the Data Acquisition Service (DAS); this telemetry enables the secure transmission of data about water extraction from a meter to the Government (such as for compliance, enforcement, billing and other activities).

Introduction

The irrigation industry supports the Metering Policy, despite initial (and in part, ongoing) concerns that the reform is very ambitious, with standards exceptionally high, and timeframes very tight. Albeit, the industry has actively supported and engaged in the reform, but since its conception, has warned Government repeatedly about barriers that may prevent, or significantly delay, policy implementation. Many of the barriers remain either fully or partially unresolved.

One of the initial implementation barriers was that the Government set deadlines for compliance without first checking whether any manufacturers made meters capable of meeting AS4747 under field conditions. It simply assumed the market would deliver. However, most manufacturers were not interested in designing such meters, given the relatively small size of the NSW market in global terms. Key manufactures wrote in mid-2020 that:

“many of the clauses are directly lifted from a potable water standard and have little or no bearing on performance in a real-life irrigation enterprise.

“Due to this added requirement, [manufacturer] is forced to withdraw our application for Pattern Approval certification, which will, in turn, make our accurate and cost-effective flow meter unavailable to Australian farmers to measure their irrigation flows.”⁷

Eventually, just five manufacturers came to the table, only one of which (Aquamonix) manufactures in Australia. These are not off-the-shelf devices, and meters suitable for pumps larger than 500mm have often had to be custom made, leaving Tranche 1 irrigators waiting months for meters to arrive.



Installation underway of a Tranche 1 site.⁸

Other key barriers include:

- Limited pattern-approved devices & timeliness of approval;
- Lack of market capacity, manufacturing delays and supply issues (i.e. due to Covid-19);
- Mobile coverage issues (for the DAS/telemetry);
- A shortage of DQPs to install and validate the new devices; and,
- Unresponsive administration when DQPs and water users seek advice and assistance to navigate the Government’s validation and certification system.

⁷ <https://www.irrigationaustralia.com.au/documents/item/1115>

⁸ Photo: Ryan Hunt, <https://twitter.com/RyanHuntAgFlow/status/1417568871637127175>

These barriers meant irrigators in Tranche 1 were unable to meet the 1 December 2020 deadline for compliance - in most instances, despite their best-efforts, and through no fault of their own. Eight months later, many still do not have the new meters fully installed and validated. This has led to a number of concerning Status Reports published by NRAR indicating a low percentage of compliance with the Metering Policy.

The rollout will only get more challenging. An estimated 3200 irrigators with about 7500-8000 smaller works in the northern inland valleys are in Tranche 2. They need meters compliant with the new standard to be installed and validated by 1 December 2021, just 13 weeks away.

A similar number of water users and works in southern inland valleys will then need to comply by 1 December 2022, and then another estimated 2390 with more than around 6000 works in coastal valleys by 1 December 2023⁹. A market struggling to supply and install meters for Tranche 1 is getting ever more swamped.

Agencies involved in the rollout have repeatedly downplayed the barriers to compliance in public statements and claimed progress in resolving barriers that is not evident to water users and DQPs. This report seeks to expose the barriers which remain a problem on the ground, by providing an evidence base to better understand the reasons for non-compliance.

In Part 2 of this report, the communications approach of NRAR is questioned. Whilst the industry fully supports transparency of compliance data to the public, and recognises the difficult position the regulator is in, there is an overwhelming perception amongst industry that the reasons for non-compliance were not understood in entirety nor communicated adequately; data was presented prior to validation which is not best-practice; inadequate context was provided in reporting; and, data presentation and selection was ultimately misleading. This cumulatively led to media reports unduly blaming the industry for government policy implementation failure. The industry seeks a more constructive and collaborative approach with the regulator to work together to identify the barriers, and ensure the Government resolves them.

While industry disagrees with NRAR's communication approach to this matter, it cannot be ignored that full compliance levels are low and the status of a large number of works is unknown. The current position is highly undesirable from both the regulator and industry perspective. This clearly demonstrates there are problems beyond industry and NRAR's control.

⁹ DPIE-Water Industry Guide - Works requiring a meter, June 2020. Water users assumed to have an average two to three works each. [Industry Guide – Works Requiring a Meter \(nsw.gov.au\)](https://www.nsw.gov.au/industry-guide-works-requiring-a-meter)

Main findings:

1. There are barriers to achieving full compliance, beyond the control of irrigators and DQPs. In most instances, these barriers are prohibitive, and are preventing (or significantly delaying) policy implementation.
2. Government intervention is required to address these barriers to implementation, otherwise policy failure is highly likely, and timeframes will almost certainly not be met.
3. The industry has made significant efforts to notify responsible agencies of these barriers, and the response to date has been inadequate with many issues remaining unresolved.
4. DPIE-Water and WaterNSW have failed to execute their responsibilities effectively including:
 - a. Clear, consistent communication to water users and media.
 - b. Efficient administration of the Water Access Licence Register (which provides an online record of every water access licence in NSW, beginning under the Water Management Act 2000), and amendment, approvals and exemptions.
 - c. Maintenance of accurate records within the WaterNSW customer database - WaterNSW's customer data base is ineffective and out-of-date, and unsuitable for use as an effective communications and compliance tool.
 - d. Implementation of a robust tracking tool for compliance - the DQP Portal was not intended to be used as a tracking tool by NRAR for individuals' compliance progress, and is not fit-for-purpose for such an intent. An appropriate tracking tool is absent.
 - e. Implementation and integration of telemetry systems.
 - f. Encourage market development to supply meters and equipment compliant with the new standard, leaving limited competition.
5. NRAR's approach to non-compliance reporting has been inconsistent, with significant and unexplained changes in the data presented. This makes it difficult to track compliance trends, but also has exaggerated the scale of non-compliance in the media.

Contrary to NRAR reporting that 45% of large water users are non-compliant, data now shows this number is actually 5%, with the status of 36% considered 'unknown', and a further 32% considered 'out of scope'.

Recommendations

- 1) **Acceptance of barriers** - NRAR to publish a list of barriers to compliance outside water users' control, to ensure the reasons for non-compliance are transparent.
- 2) **Resolution of barriers** - DPIE-Water to host a roundtable with industry, DQPs, suppliers and NRAR to understand these barriers and determine a collective pathway forward.
- 3) **Independent review**
 - a. An independent review into the implementation and administration of the Metering Policy to ensure the policy is achievable and fit-for-purpose, as well as to provide recommendations for improved implementation.
 - b. An independent review of the Water Access Register to ensure it is fit-for-purpose, and that the customer database is up-to-date and accurate.
- 4) **An immediate pathway forward for those facing barriers**
 - a. WaterNSW to undertake a 'Works Approval Amnesty' to allow water users to amend 'out-of-scope' works approvals free of charge, where water users are undeveloped, inactive or have pumps smaller than their works approval permits.
 - b. An informed and targeted communications program to water users that utilises local, regional media (TV, Radio & Newspapers) in addition to social media and mailouts.
 - c. The *Water Management (General) Regulation 2018 – Reg 233 Exemptions by Minister* should be amended to include:
 - i. A list of automatic temporary exemptions for the known barriers beyond the control of water users, until such a time as the barriers can be overcome, noting the Minister may revoke or amend the exemption at any time.
 - ii. A mechanism to provide for special circumstances not listed for automatic temporary exemption (i.e. site-specific circumstances), that enables the DQP to formally register the circumstances that inhibit full compliance, and the user to be temporarily exempt from requirements, until compliance becomes feasible. An example would be a water user unable to connect telemetry to the DAS due to poor regional telecommunications infrastructure. It would be expected that temporary exemptions determined by DQP registration would be subject to audits, and secondary review if the temporary exemption extends beyond 12 months.
- 5) **Transparent, accurate and consistent reporting** - Standardised compliance statistics to be published monthly and by valley to allow Government and industry to effectively distribute resources and communication efforts where needed but also track progress and effort.

Whilst the industry wants the reform to meet its timeframes, it is looking inevitable that decision-makers may need to consider all options if DPIE-Water and WaterNSW cannot resolve the barriers to compliance in time.

PART ONE: BARRIERS TO COMPLIANCE

Barriers to compliance

Barriers to compliance have placed immense pressure on water users throughout the rollout of the Metering Policy.

As outlined above, key barriers include:

- Market constraints
- Limited pattern -approved devices and timeliness of approval
- Lack of market capacity, manufacturing delays and supply issues (i.e. due to Covid-19)
- Mobile coverage issues (for the DAS/telemetry)
- A shortage of DQPs to install and validate the new device
- Unresponsive administration when DQPs and water users seek advice and assistance to navigate the Government's validation and certification system.

The Government and other agencies have repeatedly downplayed the scale and impact of these barriers, claiming for example that manufacturers are able to meet demand, that waiting times for meters ordered to arrive are reasonable, and that there are enough DQPs to meet demand for validation and verification.

However, anecdotally, NSWIC members have reported the scale and impact of the barriers is greater than claimed by the Government agencies responsible for rolling out the Metering Policy. NSWIC undertook its own survey of DQPs to hear directly their experiences in the field.

Methodology

DQP Survey

Participants:

This report was based on a phone survey with DQPs to better understand the barriers they were experiencing.

We started with the list of 164 DQPs that Irrigation Australia Limited (IAL)¹⁰ provides water users. We excluded WaterNSW and Irrigation Infrastructure Operator (IIO) DQPs, and several DQPs employed by large agribusinesses, as these people are not typically engaged in private practice and generally not available to all water users. Coastal-based DQPs were also excluded as unlikely to undertake work in the inland valleys where Tranches 1, 2 and 3 are being rolled out, due to geographic proximity.

This left 75 inland DQPs. We contacted each one, and 24 participated in our survey. Participation was voluntary and non-renumerated, with anonymity and confidentiality of information received (i.e. identifying details were not recorded).

Interviews

The interviews were semi-structured, with prompting questions including:

¹⁰ <https://www.irrigationaustralia.com.au/>

- Are you currently actively working as a DQP? Have you been active with Tranche 1? Are your services generally available? (only those answering 'yes' progressed to the next survey stages).
- Are you aware of any barriers for water users to achieve full compliance with metering requirements?
If yes:
 - What are the barriers?
 - How significant are these barriers?
 - What are the impacts of these barriers?
 - Who do you see as responsible for the barriers?
 - Do you consider this barrier to be within the control of the water user?
 - Is intervention of some form required to address the barriers? What is the way forward to address barriers to compliance?
 - Have you reported any of these barriers previously, or are you aware of another party that as reported these barriers (i.e. water user organisation, peak body, etc)? Was a response received? Was this satisfactory?
- If no:
 - NRAR has reported low levels of compliance with Tranche 1 of the Metering Policy. In your view, what would the cause of this be?

Additional resources:

- Data was also sourced from an online IAL survey of DQPs. A copy of the survey questions and full results is available upon request.
- NRAR media statements and status reports.¹¹
- Case studies from water users and DQPs.

Findings of Barriers

In NSWIC's DQP survey, 86% of respondents stated that water users installing AS4747 meters under the Metering Policy experienced barriers to compliance. Further, 100% of respondents who have installed and validated works in Tranche 1 have experienced barriers to compliance. There were a number of reasons stated, as outlined below.

Supply issues and market deficiencies

Around 80% of DQPs reported long lead times between ordering and the supply of meters, posing as a significant barrier. Whilst DPIE-Water now admit that *indicative* lead times for the supply of pattern-approved meters is "up to 12 weeks"¹², the reported actual lead times identified through this research range from three to six months (and 10 months in one case). Meters above 400mm and 'insert meters' (a meter that is inserted into a pipeline) faced particularly long supply lead times as they need to be made-to-order, often overseas.

¹¹ <https://www.dpie.nsw.gov.au/nrar/news/nrar-takes-action-as-45-of-affected-pumps-not-fitted-with-accurate-meters>

¹² <https://www.industry.nsw.gov.au/water/metering/overview-of-the-non-urban-water-metering-framework>

Furthermore, respondents referred to WaterNSW placing a large order for new meters to upgrade state-owned meters which has swamped a popular local metering manufacturer and greatly diminished its capacity to service private landholders. Given WaterNSW currently owns 1800 of the 6870 pump sites in Tranche 3, the impact of 'bulk orders' from WaterNSW will become a significant concern for the policies implementation as the deadline for Tranche 3 approaches.

Case Study 1: Ordering a new custom-built meter

A 1500mm diversion pipe was inspected in June 2020 and it was determined by the DQP that the meter required replacement because it could not be telemetry enabled. At the time, there was only one pattern-approved meter in this diameter and it needed a fixed power source. It was deemed unsuitable for the site by the DQP.

The DQP then started discussions with an engineering company to re-engineer the site. The objective was to reduce the diversion diameter, so that there were more options available for pattern-approved meters.

In October, it was determined to reduce the diameter of the diversion to 1200mm, giving the water user two choices of manufacturer. Final designs were drawn before ordering a new 1200mm meter in November 2020 for \$23,000 inc. GST. Later that month, a new meter received pattern-approval for up to 1800mm diameter was granted. This announcement earlier could have meant that the project to re-engineer the site may not have been required.

Re-engineering went ahead as designed and finalised in June 2021 for a total cost of \$37,000 approximately. In summary:

- The new meter arrived and was installed in July 2021.
- The site is still requiring installation checked and sign off by the DQP.
- Total cost for the work to be made compliant was \$62,000, without telemetry.
- The total site project has taken over 12-months, with delivery of the new custom-built meter 8-months.

These findings are further reinforced by specific comments in the IAL survey in response to the question *"are you aware of any issues affecting the supply chain of meters or telemetry equipment in NSW?"* Responses include:

- *"Insert meters have a very long wait on them, currently been waiting six months for some."*
- *"Lead times."*
- *"Yes, there is a shortage of larger meters, some lead times are 12-plus weeks."*

Throughout the reform roll-out, DPIE-Water strongly committed to a 'market-based roll-out'¹³ to meet the demand created by the Metering Policy. However, significant market deficiencies and gaps are clear.

¹³https://www.industry.nsw.gov.au/__data/assets/pdf_file/0016/312163/wrap-review-2020.pdf

For example, in addition to the long wait times described above, MACE (the most used meter brand in NSW) has now withdrawn from the pattern-approval process; coastal users still have no answers for submersible meters and LIDs; and, there is a lack of multisensory telemetry devices. A pattern-approved meter complies with the AS4747, within the operating ranges specified by the manufacturer; pattern-approval checks are undertaken by the National Measurement Institute of Australia (NMIA).¹⁴ Additionally, NMIA pattern-approval of a meter doesn't necessarily mean that particular meter is on the shelf ready to be purchased by water users for installation as mentioned above.

Case Study 2: No approved telemetry suitable to transitioned meter

Water users who have transitioned fully accurate meters that utilize multi-sensor technology currently do not have an approved LID which is capable of transmitting their data to the DAS.

A water user currently electronically manifolds the 'non-pattern approved system' with one telemetry device for \$1,200 and utilizes this information as part of their farm businesses now. This method was rejected by DPIE-Water for 'data security reasons,' despite the meter supplier claiming the electronically manifolded system would be sufficiently accurate. Alternatively, the water user has been quoted two significantly more expensive options which require replacement of the meter to ensure **full compliance can be reached** as there is no mark solution. These alternatives include:

1. Fitting three Krohne water meters with three Local Intelligence Devices = \$95,613 ex. GST
2. Combining the 3 mainline pipes into one 1800 mainline pipe \$165,000 works plus Krohne water meter with telemetry \$62,690 = Total \$227,690 ex. GST

Accessibility & Availability of DQPs

A DQP is a person with the qualifications and training from IAL, and the skills/experience to carry outwork in relation to approved metering equipment. Only a DQP may:

- Install or re-install metering equipment (LID's and AS4747 meters)
- Validate metering equipment
- Certify the design of new open channel metering equipment before it is installed, and
- Carry out maintenance required to be carried out by a DQP under the maintenance specifications.¹⁵

Respondents to the NSWIC survey stated that the "*accessibility of suitable installers*" was an issue facing water users with some expecting the problem to grow as more users are captured by the policy. While the DPIE-Water website¹⁶, on which NRAR relies to claim minimal practical barriers to compliance¹⁷, claims there are 162 DQP's in NSW¹⁸ - the number active commercially is approximately only 80 (based on the NSWIC survey).

¹⁴<https://www.mdba.gov.au/sites/default/files/pubs/pattern%20approved%20non%20urban%20water%20meters%20-%20revised%20january%202020.pdf>

¹⁵ https://www.industry.nsw.gov.au/__data/assets/pdf_file/0017/312335/nsw-non-urban-water-metering-policy.pdf

¹⁶ [Overview of the non-urban water metering framework - NSW Water Reform Action Plan](#)

¹⁷ NRAR letter to NSWIC, 5 August, responding to NSWIC concerns about compliance barriers.

¹⁸ DPIE source: Irrigation Australia Limited (IAL)

Further, DQPs often travel over 500km to install AS4747 meters and LIDs, with one Riverina based DQP travelling from “Mildura to the Central Darling” with another Dubbo based DQP travelling to “Dubbo, Tamworth, Wee Waa and Coonabarabran”. The long distances travelled reflect the lack of DQPs in key areas.

In addition to geographic challenges, very few businesses with DQPs on staff prioritise validation in their day-to-day function. Respondents to the NSWIC survey undertook the DQP training as an ‘add-on’ whilst their business focus still remained elsewhere e.g. welding, fabricating or engineering.



Figure 1: Map of DQP Locations Across NSW as of 03/06/2021

Additionally, COVID-19 restrictions and lockdowns are further impacting the roll-out, in terms of both supply disruptions, and the permissibility, availability and willingness of the required human resources to travel to the sites. Farmers are understandably extremely cautious about people coming onto their farms, particularly when travelling from regional centers that are experiencing COVID-19 outbreaks.

The impact of the current lockdown in regional NSW on DQP (and other human resource) availability, as well as supply disruptions, is yet to be fully quantified (the data for this report was collected before the most recent outbreak). But it is expected that the impact will be significant, particularly for the upcoming Tranche 2 (northern NSW water users, December 2021 compliance deadline) for which this is a critical period for installation.

Of note, the regional towns most heavily impacted by the current COVID-19 outbreaks in north-western NSW (such as Dubbo) are also the regional hubs for many irrigation farmers, and the compliance-process is heavily entrenched and reliant on service networks radiating from these regional hubs.

Telemetry

Mobile Connectivity

Mobile connectivity is required to transmit telemetric information to the WaterNSW DAS; this is a compliance requirement for Tranche 1. Many DQPs reported mobile connectivity issues. NRAR has also acknowledged this barrier, stating 20% of water users in Tranche 1 were inhibited by poor regional mobile connectivity¹⁹.

Respondents to the IAL survey found that mobile connectivity was a significant barrier for water users they serviced:

- *“I would like more information on setting up equipment and sending it to the DAS. All the meters I have worked on get very low to no phone coverage.”*
- *“Require information on what is required in areas where signal is weak or not available.”*

Whilst this connectivity deficiency speaks more broadly to services available to regional and rural Australians, it prohibits water users from being fully compliant with the Metering Policy through no fault of their own with these users being reported in the 32% of ‘works on a pathway to compliance’.

WaterNSW during recent Customer Advisory Group (CAG) meetings indicated that satellite technology options were promising but there is no approved alternative available.

Integration of telemetered data

Telemetry requirements were advertised to users throughout the consultation process and policy as providing user and operations benefits. For example, the Metering Policy indicates that data collected by the DAS, and through manual recording and reporting, will assist NRAR, WaterNSW and DPIE to undertake compliance and enforcement, billing and other water management activities, and support water users and the river operator in managing water resources across NSW.²⁰

The DAS went live in April 2020, four months after the original Tranche 1 deadline, stating:

“This will enable the secure transmission of water extraction data from water users to the department, delivering tangible benefits to the government, water users and the general community.”

“The use of LIDs that can record and transmit water take data in real-time, is a cornerstone of NSW’s non-urban metering rules and will also support NSW’s new floodplain harvesting measurement rules. Both are part of the significant actions implemented in the Water Reform Action Plan to improve water management,” Mr Walker said.

¹⁹ Email from NRAR CRO Grant Barnes to Harry Edmondson Policy officer, 15 April 2021.

²⁰ https://www.industry.nsw.gov.au/__data/assets/pdf_file/0016/312361/NSW-non-urban-water-metering-policy.pdf

“The new telemetry system will collect and store data received from LIDs, passing it onto the Natural Resources Access Regulator, WaterNSW and the Department of Planning, Industry and Environment-Water. Water users will also be able to access their information via a private online dashboard.”²¹

However, during the recent WaterNSW CAG discussions it was asked how telemetry was integrating with WaterNSW systems. It was revealed that the DAS has not been configured for real time access by WaterNSW to allow for more efficient river operations, nor it is connected with the accounting system iWAS with no timeline for implementation.

“Customers questioned the timeframes for connecting the DAS to iWAS and river operations and are keen to start seeing the benefits of telemetry. WaterNSW noted it is unlikely in the next 3-6 months, but it is on the workplan.”²²

Thus, currently there are no benefits of installing telemetry for government and users, until this is resolved.

DQP Portal

The DQP Portal is a secure online portal for DQPs installing and validating AS4747 Meters and LIDs. The DQP Portal is used to: submit the Validation Certificate to notify the water user that the meter installation is compliant; submit a certificate of compliance for new open channel metering equipment installed after 1 April 2019; and, generate a compliance report for an existing meter that is being kept under transitional arrangements.²³

DQPs consistently raised the functionality and useability of the DQP Portal as problematic in both the NSWIC and the IAL surveys. Respondents to the NSWIC DQP survey said the DQP Portal was “slow” and “difficult to use” and was “the worst part of their job”. Whilst recent updates have improved the user interface, DQPs struggled with the following issues:

- The three-month “time-out” for DQPs logging installations has caused issues as lead times for meters and LIDs have blown out, forcing DQPs to restart the process if it goes beyond the 3-month limit.
- Long-wait times for meter serial numbers to be authorized, which is then further complicated by “WaterNSW entering incorrect meter sizes and serial numbers”.
- Addressing issues or mistakes in the DQP portal is “frustrating” as email was the “only way to contact WaterNSW,” which created significant delays.

Additionally, it should be noted that the DQP Portal was never intended to be used as a tracking-tool to monitor progress towards compliance. However, NRAR is heavily relying on the portal to determine compliance rates. Further, given the problems with the DQP Portal, it has been reported that some DQPs were unable to, or were significantly delayed, in uploading to the DQP Portal. This then means the DQP Portal would not be producing an accurate indication. It is thus highly questionable that it is fit-for-purpose for this intent, and there remains an absence of a fit-for-purpose compliance-tracking tool.

²¹ ([New water metering telemetry system now operational - Water in New South Wales \(nsw.gov.au\)](https://www.water.nsw.gov.au/news-and-media/news-items/new-water-metering-telemetry-system-now-operational))

²² <https://www.waternsw.com.au/customer-service/service-and-help/groups/gwydir-cag>

²³ <https://www.irrigationaustralia.com.au/certification/dqp-portal-faqs-videos/dqp-portal>

Communication of policy to water users

Mixed messages from NRAR and DPIE-Water have created confusion among water users who have found it difficult to decipher how the policy applies to them and the correct deadlines. A significant number of DQPs cited that many water users simply did not realise they were captured by the policy or were “*unsure of the exact details and requirements of the policy*”.

This report acknowledges that DPIE-Water sent letters six months prior to the deadline to all water users captured by Tranche 2 of the Metering Policy. However, DQPs have cited “*poor communication of policy*” as an issue throughout Tranche 1. The letter sent to water users has been described as confusing and poorly written, and as a result, many water users remained unclear of their obligations and timeframes. Despite that, the significant lead times for meters, cost to water users and time required to book DQPs leaves little time to meet the required installation deadlines anyway.

Case Study 3: Example of MW2452-0001

Communication issues have been highlighted through the consultation and advertisement of the MW2452-0001 licence condition for water users in Lachlan, Murrumbidgee, Hunter, Richmond and Murray and Lower Darling Water Sources. The condition inadvertently captures 2500 sites under 100mm, of which more than 800 are domestic and stock users. The MW2452-0001 conditions states:

Water must be taken through metering equipment that meets the following requirements:

- a. The metering equipment must accurately measure and record the flow of all water taken through the water supply work authorised by this approval, the metering equipment must comply with the Australian Standard AS 4747: 'Meters for nonurban supply', as may be updated from time to time,*
- b. The metering equipment must be sited and installed at a place in the pipe, channel or conduit between the water source and the first discharge outlet. There must be no flow of water into or out of the pipe, channel or conduit between the water source and the metering equipment, and*
- c. The metering equipment must be operated and maintained in a proper and efficient manner at all times.*

The condition added to licences in 2018 required users to immediately comply with the Metering Policy. But DPIE initially provided no formal guidance on the condition, which included WaterNSW owned meters. This led to the Government issuing an exemption until 1 December 2021 for users captured by the condition. Further, DPIE sent a confusing five-page letter on 17 June 2021 stating that ‘the extension may apply to you’, creating further confusion for users with many unaware that they were required to meet the Metering Policy as they have been consistently told it only applies to users with pumps above 100mm.

In summary, condition MW2452-0001 for the 2500 sites under 100mm is not only inconsistent with the Metering Policy but places a significant cost (for example, a Siemens AS4747 meter was quoted at \$3396 before installation and validation) on water users who use small amounts of water sporadically for domestic use and stock watering. Furthermore, given the significant barriers to compliance for Tranche 1 users with a shortage of DQPs and significant lead times of up to six months for meters to be delivered, it is unlikely these water users would be able to achieve compliance by the given deadline.

Administration & Implementation

As stated below in the ‘Awareness of Barriers’ section, NSWIC and other irrigation organisations have made consistent efforts throughout the process to consult with DPIE-Water, WaterNSW and NRAR. However, poor administration and ineffective implementation has plagued the Metering Policy since its inception. Examples of poor administration are detailed below.

Exemptions:

A work may be granted an exemption from the metering requirement if it is not possible for its water take to be measured by metering equipment. The water user will need to demonstrate that the work that requires exemption can’t be measured by metering equipment.²⁴ On rare occasions, when appropriate, the Minister can grant these exemptions if a site requires a meter size greater than what is currently pattern-approved.

The Tranche 2 deadline of December 2021 is less than four months away and it is likely that some sites will need engineering works that will take time, as well as lead time for ordering any new devices. The massive delay times in determining the exemptions has raised significant concerns about the process and the Government’s ability to implement the policy whilst leaving for water users in the limbo as to how they comply to the Metering Policy.

Case Study 4: Section 233 – Exemption

Since October 2020, 10 Section 233 Exemption requests have been lodged by one DQP. As of the date of this report, there has been no decision or advice for these applications other than more information. These exemption requests are for sites for the 1 December 2020 Tranche 1 timeframe, and the next tranche for 1 December 2021.

The exemptions were requested for larger site installs (1200mm-1800mm) where these works have an in-field maximum flow rate higher than any maximum flow rate, currently pattern-approved. Meaning that while a meter is theoretically available in the size range, if a DQP was to install it knowing that the work has the ability to convey water at flow-rates higher than it is approved, they would be installing that meter outside of its approval conditions and in breach of the rules.

Further information was requested for some of these applications in December 2020 and again in July 2021. DPIE-Water in December 2020 also developed a Section 233 application form, which they now request to be used - there was no formal process beforehand.

All these sites have no pathway to compliance. The December 2020 deadline has passed and these sites are likely to be considered non-compliant without any action because the DQP has not started a validation or new install, because there is no suitable meter available.

WaterNSW Customer Database and the Access Register

An accurate customer database is the foundation for the roll-out of the Metering Policy and compliance audits from NRAR. Alarming, NRAR in its July 2021 compliance status report acknowledged that it was unable to

²⁴ https://www.industry.nsw.gov.au/__data/assets/pdf_file/0017/312335/nsw-non-urban-water-metering-policy.pdf

contact the audit works approval holders of 411 sites from Tranche 1 (36%) due to incorrect addresses or contact details. This significant gap in the database is of significant concern, because it undermines the Government's ability to effectively communicate with water users or accurately assess compliance rates. It is also surprising given this database is utilised for billing purposes by WaterNSW.

Furthermore, the admission in July 2021 that only 715 sites were assessable as opposed to the 1137 sites in March 2021 and 1126 sites in April 2021, as a result of an insufficient database, raises questions as to how the March and April compliance status reports were generated.

NRAR Compliance Efficiency

In addition to the lack of DQPs to service sites in upcoming tranches, NRAR's inefficient auditing of Tranche 1 raises concerns of its ability to audit Tranche 2. NSWIC understands NRAR officers travelled 86,000km to 715 sites in their July Tranche 1 compliance status report, which is 120km per site assessed. If NRAR continues at this level of efficiency for Tranche 2, compliance officers will need to travel 902,000km to audit all 7500 sites - which is equivalent to 22 laps around the Earth. This statistic highlights the Government's underestimation of the monumental task of the Metering Policy and its underestimation of resources required to ensure its success.

Out of Scope Works

Out-of-scope works are pump sites that are deemed inactive, cannot not be used, are no longer used by water users, never physically existed, or a less than the threshold for the particular tranche of the Metering Policy. NRAR's most recent status report for Tranche 1 in July 2021 found 49% of the 715 work sites inspected were "out-of-scope". Of the 351 works deemed to be out-of-scope, 84% were found to be inactive works. This is a problem because these works are reported as non-compliant (i.e. for example, someone with a pump-size smaller than their approval is considered non-compliant in the Tranche 1 statistics) which causes the compliance data to be significantly inaccurate, over-estimating the rate of non-compliance.

Upon discussions with water users, NSWIC has identified two significant boundaries for water users in declaring out-of-scope works:

1. The \$259 administration fee to amend the size of the pump or status of the pump on each works approval.
2. An understanding of the impact of amending a pump size on works approval or declaring a works inactive. Many water users are fearful that they will not be able to increase their pump sizes to the original approved size or reactivate the work if required in the future.

As approximately 3200 water users with an estimated 7500 works in Tranche 2 approach their compliance date of 1 December 2021, the trend of out-of-scope work based on Tranche 1 poses a significant issue. It creates an unnecessary administrative burden on the industry regulator and adversely impacts compliance statistics that in turn unfairly damages the reputation of industry.

Ultimately, the inability of the Government to process exemptions for sites over 1500mm, maintain an effective customer database and the ability of the industry regulator to effectively audit compliance in a timely manner highlights significant implementation deficiencies that are jeopardising the roll-out of a crucial policy reform for the irrigation sector.

Cost

AS4747 meters, LIDs and their installation is a significant cost, especially when considered in the context of the 2017 – 2020 drought which significantly impacts farm productivity and income, recent bushfires and other natural disasters, and COVID-19. Throughout NSWIC's DQP survey, DQPs raised the financial impact of three to four years of severe drought and the concerns water users have spending significant capital on metering devices with limited benefit to their farm business.

Tranche 1 represents the largest water users, which are arguably best resourced to meet the Metering Policy. Despite this, Tranche 1 users have still faced financial barriers to compliance as highlighted by compliance figures in the NRAR's July compliance status report. The inability to overcome financial barriers is of great concern for water users captured in Tranches 2, 3 & 4 of the Metering Policy which represent a large proportion of NSW's small farming businesses. This sentiment is echoed by DQP's interviewed by IAL and NSWIC.

For example, statements from DQP's (IAL survey) include:

- *"Yes, lack of money to purchase after a long drought".*
- *"Putting \$10,000 worth of equipment on a pump is ludicrous, cost prohibitive and doomed to failure."*

The significant cost burden is exemplified on water users to comply to the stringent Metering Policy is exemplified by the case studies below.

Case Study 5: Replacement of a fully functioning meter that could not be telemetry enabled

In June 2020 (well ahead of the compliance timeframe), a farmer contacted their DQP about a 500mm pump work site for an inspection. This revealed that because the existing meter was not telemetry enabled, it would need replacement.

As a result, a new meter was ordered in September 2020. New structural designs were made and engineered as the location and type of installation for the new meter was different to the existing meter and work was required.

Engineering and excavation works were the largest component of the total project costing around **\$35,000**. The new meter was installed after the engineering works were completed in January 2021. Total cost to replace the meter was **\$52,000**. The site is still awaiting telemetry.

The Metering Policy required this water user to replace a fully functioning, older generation meter with a new AS4747 pattern-approved meter, so it could be telemetry enabled. The \$52,189 incl. GST expense so far or \$16,137 incl. GST just for the meter, has been incurred with no gain or improvement compared to 12 months ago when the water users initiated the process.

This is because even if the telemetry was installed, the system is not fully functioning at the Government's end.

Case Study 6: Alternatives for sites with non-pattern approved transitioned meters

Water users are capable of transitioning existing non-patterned approved meters if they meet the accuracy requirements. However, many water users are faced with the prospect of needing an alternative compliant solution shovel-ready if the transitioned meter fails.

For this site, the alternative, compliant metering solutions to replace the functioning, non-pattern approved meter with multiple sensors present two significantly more expensive options:

1. Fitting three Krohne water meters with three LIDs = \$95,613 ex. GST
2. Combining the 3 mainline pipes into one 1800 mainline pipe \$165,000 works plus Krohne water meter with telemetry \$62,690 = Total \$227,690 ex. GST

The two case studies above also highlight the cost of installation and engineering works, which are in most instances the larger portion of the compliance costs. Whilst these are typically one-off costs (unlike the meter itself that likely has a smaller lifetime), they are a direct response to the policy requirements and increase the financial burden of compliance.

It is exceedingly difficult to estimate the total cost given the varying sizes of meters, array of meter manufacturers and different installation techniques. The case studies above can be utilized to approximate the cost of metering equipment. Provided one meter and LID costs between \$20,000 – \$30,000 (as above) per site it would cost the owners of all 1126 works in Tranche 1 \$33,780,000. However, given the calculation does not include installation, any re-engineering which is likely given the change in meter configurations being required and validation costs, the costs to industry are significantly higher.

Water availability

Finally, during the critical implementation phase for Tranche 1, the extreme drought meant that farmers did not have water available to test meters in-situ. In many instances this prevented progression towards compliance, or at least caused significant delays until water was available for testing to take place. The relatively recent rainfall in 2020/2021 has since resolved this barrier.

Risks if barriers not addressed

1. Impacts on implementation of the Metering Policy - if the barriers prevent full compliance, then **policy failure** due to an inability to implement the reform is highly likely. This means the Metering Policy objectives would not be met.
2. Non-compliance on a larger scale – the three later tranches to be delivered progressively by 1 December 2021, 1 December 2022, and 1 December 2023, will encounter these same barriers if they are not identified and addressed. Small, less resourced operators in the later tranches will be more vulnerable to enforcement action due to barriers beyond their control.
3. Stress and anxiety of water users – irrigators take non-compliance very seriously. An inability to meet full requirements leaves water users highly **stressed** and anxious, who remain at the whim of the industry regulator.
4. Reputational damage - the April 2021 and July 2021 NRAR compliance status reports gave an impression that the low compliance rates were due to a lack of will by irrigators. This risks major **reputational damage** of the industry.
5. Funding – this is a significant and expensive reform, and policy failure would mean the millions of dollars spent by government and private business on the reform so far would be wasted.
6. Regulator's role – in these circumstances, it falls to the discretion of the regulator to be fair in its approach to understand these barriers in determining enforcement action. This is not an ideal position for either the regulator or the industry.
7. Public confidence – the status reports and subsequent media reporting undermined public confidence in water compliance. The public must be able to understand the barriers and have confidence that they are being resolved, understand that meters (consistent with standards in other States) are in place in the meantime, and have confidence that the regulator will be firm (but fair) in its approach.

NRAR's enforcement position

On 22 April, NRAR said:

“Water users who have not installed an appropriate meter and had it validated by a certified professional will be required to demonstrate that they have made reasonable efforts to do so. Those who are unable to demonstrate their efforts, will be subject to enforcement action.”²⁵

In practice, this means that water users need to be able to demonstrate (i.e. document) that they have taken all reasonable steps to become compliant, and thus the reason for non-compliance is due to barriers beyond their control.

However, following the Audit of Tranche 1 water users in July 2021, NRAR signaled its intent to take more proactive compliance action. Water users captured by Tranche 1 who have made ‘no effort to comply’ will be issued with fines while water users with ‘works without meters – reasonable effort to comply’ will be issued with legal directions to comply.

“For those who continue to ignore the rules, our response will become progressively severe, up to prosecution if necessary.”²⁶

NSWIC and the irrigation industry support NRAR taking firm compliance action against those who have done the wrong thing, particularly those who have made no effort to comply. However, in circumstances where water users have taken all reasonable steps, but are unable to comply despite their best efforts, a special case is presented.

This special case is for circumstances where compliance is impossible, despite best efforts. In this special case, and without resolution of barriers by the relevant authorities to make compliance possible, the discretion of NRAR to recognise these barriers in fairness is relied upon. This is not the preferred position of the industry, nor the regulator, who would all prefer resolution and full compliance, so the rules can be enforced.

²⁵ <https://www.industry.nsw.gov.au/water/news/nrar-assessing-compliance-with-new-metering-regulations>

²⁶ <https://www.dpie.nsw.gov.au/nrar/news/nrar-takes-action-as-45-of-affected-pumps-not-fitted-with-accurate-meters>

Government awareness of barriers

There is ample documentation available which shows the irrigation industry has alerted those responsible to these barriers throughout the implementation of the Metering Policy. This evidence of genuine efforts to raise, record and resolve the barriers which inhibit irrigators in NSW from complying with new requirements, makes it difficult to find any avenue to which the Regulator nor Government could be unaware that such barriers exist.

Specific examples of correspondence written by several industry organisations are at **Appendix 1**.

Further, the below Box 1 identifies the efforts made by NSWIC within the previous 12 months (noting this is in addition to valley-level water user organisations).

Box 1: Reports of Barriers raised to relevant authorities by industry

1. **23/04/2021** – Meeting with DPIE regarding barriers to metering equipment uptake.
2. **15/04/2021** – Letter to DPIE (cc'd NRAR and Minister Pavey) regarding market constraints preventing metering compliance.
3. **14/04/2021** - Emailed NRAR expressing concern regarding the above compliance statistics and seeking further information and clarification on data presented.
4. **06/04/2021** – Phone meeting with DPIE regarding DQP numbers in NSW.
5. **31/03/2021** – Phone meeting with DPIE regarding metering compliance levels as reported by DQP portal in NSW.
6. **04/11/2020** – DPIE and WaterNSW presented to NSWIC AGM on upcoming pattern approved metering frameworks for state-owned and privately owned meters.
7. **30/09/2020** – Meeting with DPIE to discuss metering regulation.
8. **22/09/2020** – Phone call with NRAR and follow up email regarding NRAR's possible response to landholders who cannot meet requirements due to lack of market supply or DQP availability.
9. **18/09/2020** – Letter sent to NRAR regarding compliance education of irrigators.
10. **30/07/2020** – Meeting with DPIE, GVIA and NSWIC to discuss metering and telemetry.
11. **26/06/2020** – Letter to Minister Pavey regarding metering implementation issues
12. **15/06/2020** – Letter to Minister Pavey and DPIE regarding concerns with 1 December 2020 deadline for telemetry devices for pumps greater than 500mm.

The below excerpts are sourced from a NSWIC letter to DPIE-Water and the NSW Water Minister on 9 August 2019:

- *"Impractical timeframes offer significant risk to all parties including perceived recalcitrance from water users; perceived botched implementation from government; and failing on political commitments. There are concerns that these timelines are unlikely to be met..."*
- *"On a practical note, given extreme drought conditions, there simply isn't the water to calibrate the meters. As such, if it does not rain significantly and there remain 0% water allocations across much of the Murray-Darling Basin (as is expected), it will not be possible to test the meters on the ground.*
- *"The pattern approval process is yet to deliver a suite of meters that satisfy all conditions (particularly large users)."*
- *"... it is physically not possible for the number of Duly Qualified Persons to install the volume of meters required."*

Cost of mismanaged and delayed policy implementation

It must be noted that a significant portion of costs for the Metering Reform are recovered from water users fees and charges, in addition to water users having to purchase, install and maintain privately-owned meters. The exact nature of the costs is yet to be finalised, after the Independent Pricing and Regulatory Tribunal (IPART) delayed commencement of the 2021 pricing period due to insufficient information from WaterNSW on metering costs and an inability at that time to demonstrate efficient costs.

IPART subsequently published the *'Non-urban metering reform charges from 1 October 2021 to 30 June 2025 Draft Report'*²⁷ in March 2021. The Final Report is expected to be published in early September 2021. The Draft Report proposed that 100% of efficient costs are to be recovered from water users, with the introduction of 5 new charges for WaterNSW to recover the efficient costs.

Firstly, the irrigation industry has firmly rejected the draft decision for water users to pay 100% of the efficient costs.²⁸ The industry has expressed the position that the NSW Government drove the need for upgrades due to its failure to deliver compliance services that water users were required to pay for in previous determination periods. The Government responded to the loss of public confidence due to its own failures by setting a higher standard of metering regulation (above the national standard, and any other standard globally) with which water users must now comply. The industry is of the position that the government must fund their reform.

However, if the industry will be made to accept a 100% user-share to cover the reform costs, there is a reasonable expectation that the reform will be effective, deliverable, and achieve its intended outcomes with an adequate level of service.

Secondly, water users are concerned about the number of costs that depend on successful roll-out of the metering reform. IPART engaged consultants, Cardno, to review proposed expenditure on the Metering Reform. The Cardno Report²⁹ (P 23) finds:

*"If roll-out is delayed, there is potential that some of these costs may need to increase."*³⁰

Tranche 1 can already be considered 'delayed' (as 100% compliance is yet to be achieved), and given the aforementioned barriers to compliance, it is highly likely that further tranches will similarly face delays. This likelihood for further delays is also reflected in the Cardno Report (P 23):

²⁷ IPART (2021) "Supplementary Draft Report - Review of Water NSW non-urban metering reform charges - June 2021" *WaterNSW rural bulk water prices from 1 October 2021*. Available here: https://www.ipart.nsw.gov.au/documents/draft-report/supplementary-draft-report-review-water-nsw-non-urban-metering-reform-charges-june-2021?timeline_id=13102

²⁸ NSWIC Submission (2021), "IPART Review of WaterNSW's Non-Urban Water Metering Reform Charges From 1 October 2021 to 30 June 2025 – Draft Report". Available here: <https://www.nswic.org.au/wordpress/wp-content/uploads/2021/07/2021-07-23-NSWIC-Submission-IPART-Supp-Draft-Report-Metering.pdf>

²⁹ Consultant report by Cardno, "Review of WaterNSW's metering reform costs - March 2021". Available here: <https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Rural-Water/Review-of-Water-Management-prices-from-2021/16-Mar-2021-Consultant-report-by-Cardno-Metering/Consultant-report-by-Cardno-Review-of-WaterNSWs-metering-reform-costs-March-2021>

³⁰ Ibid.

“...progress to date has been well behind schedule for the meters that needed to be installed/validated in FY21 to meet the Stage 1 rollout deadline of 1 December 2020 for all surface water pumps 500 mm or larger. The program ramps up substantially for the Stage 2 Northern Region works that have a 1 December 2021 rollout date, with a total of 7,601 surface water and groundwater meters either needing to be installed, replaced, validated by a DQP as meeting the requirements to remain in place or to be made inactive by the water user.”³¹

The exact nature and significance of the costs increases for water users resulting from delays is yet to be determined, noting NSWIC has sought clarification from IPART through public consultation processes.

It must be noted that, as this report finds, the barriers that are prohibiting full compliance are external and outside the control of water users or their DQPs. This then raises serious questions regarding accountability, and the funding of delay costs, which to date, remain unresolved.

Finally, there remains concerns regarding the adequacy of information availability to demonstrate efficient costs. The lack of information availability from WaterNSW on metering costs was the primary reason for IPART to delay commencement of the 2021 pricing period whilst further information from WaterNSW was sought. IPART initially said:

“Based on the information provided, our preliminary position is that, at this stage, we do not yet have sufficient information to set prices to include the proposed metering costs in regulated prices over the upcoming determination period. We have concerns about whether Water NSW’s proposed costs are efficient and we consider more work is needed to ensure Water NSW’s implementation of these reforms is both effective and efficient.”³²

The industry advocated that unless efficient costs can be demonstrated, then it is not appropriate for those costs to be recovered from water users. The industry noted that if there remains any uncertainty or information availability problems, Government should have to at least cover the gap to the extent of that uncertainty. Ultimately, NSWIC recommended that the costs for the initialisation of administering the metering reform are borne by Government. This was largely consistent with IPART’s initial draft decision:

“We consider Water NSW should bear the risks and costs associated with the implementation of this policy until it has demonstrated that its proposed costs are efficient so they can be included in regulated prices.”³³

However, in the most recent [Supplementary Draft Report](#), IPART has said:

*“WaterNSW has provided sufficient information for us to make draft decisions on efficient costs”.*³⁴

³¹ Ibid.

³² IPART, “Draft Report - WaterNSW Rural Bulk Water” [P 11]. Available here: <https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Rural-Water/WaterNSW-rural-bulk-water-prices-from-1-October-2021>

³³ IPART, “Draft Report - WaterNSW Rural Bulk Water” [P 12]. Available here: <https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Rural-Water/WaterNSW-rural-bulk-water-prices-from-1-October-2021>

³⁴ IPART (2021) “Supplementary Draft Report - Review of Water NSW non-urban metering reform charges - June 2021” *WaterNSW rural bulk water prices from 1 October 2021*. Available here:

This, however, is contrary to Cardno finding:

“... there are a number of key areas where there is no better information available at this point in time to either conclude that WaterNSW’s assumptions are robust or to make an accurate and reliable adjustment to the specific cost component.”³⁵

The industry thus has little confidence in the information underpinning decisions on the efficiency of metering charges, particularly given implementation delays and barriers.

In conclusion, there are a number of issues arising regarding the barriers to compliance and slow policy implementation on the reform costs to water users:

1. Water users are likely to fund 100% of the costs for administering the project (in addition to the purchase, installation and maintenance of privately-owned meters), and thus reasonably expect effective policy implementation, and achievement of policy objectives;
2. Water users will potentially face increased costs resulting from the delays to policy implementation;
3. There remains uncertainty regarding whether proposed costs are efficient, and whether there is adequate information available to demonstrate efficiency.

https://www.ipart.nsw.gov.au/documents/draft-report/supplementary-draft-report-review-water-nsw-non-urban-metering-reform-charges-june-2021?timeline_id=13102

³⁵ Consultant report by Cardno, “Review of WaterNSW’s metering reform costs - March 2021”. Available here: <https://www.ipart.nsw.gov.au/Home/Industries/Water/Reviews/Rural-Water/Review-of-Water-Management-prices-from-2021/16-Mar-2021-Consultant-report-by-Cardno-Metering/Consultant-report-by-Cardno-Review-of-WaterNSWs-metering-reform-costs-March-2021>

Emerging issues

Submersible pumps and LID in coastal valleys

Coastal water users are captured in Tranche 4 with a 1 December 2023 compliance deadline. These water users have expressed serious concern regarding the Metering policy and the suitability of the current list of pattern-approved meters for coastal irrigation practices.

Given the higher frequency of flooding in coastal catchments compared to inland catchments, coastal irrigation pumps are often designed to be removable (can be detached from pump site and stored on higher ground) or submersible (can remain underwater during flood events), as major flood events in the Richmond-Wilson catchment, for example, can reach over 10 meters³⁶.

No AS4747 meters are currently approved to operate in line with these practices nor does the Metering Policy have scope to accommodate such needs of coastal irrigators. This presents a significant challenge to compliance for coastal users who are captured by the Metering Policy and demands significant attention to prevent implementation barriers for Tranche 4.

³⁶ http://13.70.122.213/wp-content/uploads/2018/07/137639_Richmond_River_Flood_Mapping_Final_Report.pdf

PART TWO: COMPLIANCE REPORTING

NRAR Compliance Status Reports:

NRAR published three compliance status reports for Tranche 1 of the Metering Policy in the first six months of 2021, which showed low levels of compliance. Whilst the industry supports full transparency of reporting compliance rates, there were a number of inconsistencies, discrepancies and questionable approaches in NRAR's compliance reporting and data, which has created significant concern and ultimately misrepresented the efforts of water users and those servicing them to achieve this reform. Primarily, NRAR's lack of acknowledgement of water users' barriers to compliance and governments poor administration, combined with the selective use of data in NRAR's media strategy, has painted an inaccurate representation of the circumstances. The industry has been left frustrated by the unnecessary serious reputational damage to the irrigation sector which this has caused, and lost opportunity for the regulator to act constructively to identify and resolve the barriers with government.

The inconsistencies are documented below.

NRAR status report, 5 March 2021

The March 'desktop assessment' was presented to NSWIC Members at their March General Meeting, and was made publicly available.³⁷ The audit of Tranche 1 assessed 1137 pump sites across NSW which NRAR said were held by 387 entities. The compliance statistics for metering sites were divided into two categories: partly compliant sites with a validated AS4747 meter installed, and, fully compliant sites with a LID installed and connected to the DAS.

Table 1: Distribution of eligible works by valley: n = 1137 [note: since 1 Feb 2021, status of one of the pumps shifted from 'active' to 'inactive' rendering the pump exempt].

Catchment	No. of Works	No. of Approvals	No. of Entities with Approvals
Barwon-Darling	139	49	30
Border Rivers	150	55	40
Greater Metro	11	7	7
Gwydir	212	85	57
Lachlan	63	32	30
Macquarie	131	63	50
Murray	1	1	1
Murray Lower Darling	38	23	19
Murrumbidgee	126	54	44
Namoi	253	152	113
Rest of NSW	14	10	8
GRAND TOTAL	1,138	531	387

³⁷ https://www.industry.nsw.gov.au/__data/assets/pdf_file/0011/356447/grant-barnes-nswic-agm-march-2021.pdf

Thirteen per cent of water users (150) in Tranche 1 were deemed to be 'partly compliant' and 25 per cent of users were fully compliant with the Metering Policy. Reasons for non-compliance were not provided for the remaining users.

Table 2: Tranche 1 compliance

Registration by Valley as of 5 March 2021			
	Installation Type		
	New	Existing	Grand Total
Barwon-Darling	2	8	10
Border Rivers	2	10	12
Gwydir	5	29	34
Lachlan	10	2	12
Macquarie	9	2	11
Murray Lower Darling	1	10	11
Murrumbidgee	3	5	8
Namoi	29	22	51
Rest of NSW		1	1
Grand Total	61	89	150

Table 3: Tranche 1 Meters with LID installed and connected DAS

Validation Certificate by Valley as of 5 March 2021				
	Installation Type			
	New	Existing	Draft	Grand Total
Barwon-Darling	5	8		13
Border Rivers	1	15		12
Gwydir	4	43	2	49
Lachlan	5	9		12
Macquarie	3	7	2	12
Murray Lower Darling	4	30	1	35
Murrumbidgee	1	89	3	93
Namoi	17	41	1	59
Rest of NSW		1		1
Grand Total	40	243	9	150

NRAR report, 22 April 2021

In April 2021, NRAR published a second status report of compliance by Tranche 1 water users with the new Metering Policy requirements.

Table 4: Distribution of eligible works by valley: n = 1126, NRAR status report, 21 April 2021

Catchment	No. of Works	No. of Approvals	No. of Entities with Approvals
Barwon-Darling	139	49	30
Border Rivers	146	54	39
Greater Metro	7	6	6
Gwydir	212	85	57
Lachlan	63	32	30
Macquarie	128	62	49
Murray	1	1	1
Murray Lower Darling	38	23	19
Murrumbidgee	126	54	44
Namoi	252	151	112
Rest of NSW	14	10	8
GRAND TOTAL	1,126	527	384

The NRAR status report on 22 April 2021 showed that of the 1126 pumps within Tranche 1 (down from the 1137 said to be in Tranche 1 in the March status report), 67 per cent (754) had not commenced action to comply with the new metering standard, while six per cent (67) were fully compliant. The remainder were at various stages on the pathway to compliance.

Table 5: April Compliance Statistics

Compliance Status	Pumps ≥ 500mm (Number)	Pumps ≥ 500mm (percentage)
1. Action not yet required (Nil activity in DQP Portal)	754	67%
2. Action Initiated ("draft" in DQP portal)	18	2%
3. Engaged initiated ("submitted" in DQP portal)	287	25%
4. LID installed and connected to DAS ("installed" in DQP portal)	67	6%
TOTAL	1,126	100%

In a media statement on 22 April 2021³⁸, NRAR said:

"The Natural Resources Access Regulator (NRAR) has found low levels of compliance within the first group of water users with surface water pumps 500mm or larger, who were required to comply with the new non-urban water metering framework by December 2020.

NRAR's initial assessment of compliance has indicated that water users who own two-thirds of these surface water pumps have not taken action to install accurate, tamper-proof or approved meters or to have them validated by a qualified professional.

This means that water extracted by two-thirds of these pumps is not being recorded to the standard required by law.”

...

“Throughout April and May, NRAR will contact water users to determine where they are on the path to compliance and to understand what legitimate barriers may exist.

“We have been told by some that there are barriers that have interfered with their ability to comply with these new regulations. We will confirm what legitimate barriers exist when we get out on farm,” Mr Barnes said.”

This April report was based only on desktop research conducted by NRAR. The following week, NRAR sought to verify this data by contacting these water users. Following verification, NRAR informed industry that of those in Tranche 1, only nine per cent of works were fully compliant. However, of the remaining 91%, approximately:

- The owners of one-third (~372 works) need to inform the regulator the works are inactive or below 500mm and thus not subject to Tranche 1 – and subsequently, this proportion should be excluded from the Tranche 1 data;
- The owners of one-third of works can demonstrate they have taken active steps towards full compliance; and,
- The owners of the remaining one-third cannot demonstrate active steps.

This means, in practice, if the one-third (of the 91%) who are not within Tranche 1 (but who were considered within Tranche 1 for the initial report) are removed, the verified compliance outcomes show a significant improvement on NRAR’s April compliance table. Compliance rates are now double at 12 per cent, with no action taken yet on 44 per cent of in-scope works, compare with the 67 per cent purported in the April Status Report.

Table 6: Compliance rates of in-scope works in NRAR April 22 Status Report

NRAR April Compliance Status Report		
Compliant	101	12%
Pathway to compliance	372	44%
No action taken yet	372	44%
Total in scope	845	

NRAR report, 13 July 2021

In July 2021³⁹, NRAR released the results of a statewide inspection of Tranche 1 works which were required to have accurate meters installed and validated by a DQP, and able to transmit water take to the DAS by 1 December 2020.

Of the 1126 works now said to be in Tranche 1, NRAR audited 715 sites, with 351 sites (49 per cent) found to be out-of-scope (pumps sites were below the Tranche 1 threshold (n=52) or the pump sites were inactive (n=299)).

The remaining 364 sites inspected were separated into three compliance categories:

- Fully compliant – has installed an AS4747 meter and LID which has been connected to the DAS
- On pathway to compliance – has installed an AS4747 meter or made reasonable effort to comply by 1 December 2021
- Non-compliant – had not ordered a meter or made reasonable effort to comply by 1 December 2021

Table 7: Compliance rates breakdown on audited sites

Metering Compliance Rates State-wide		
Sites Audited – Total	715	
Out-of-scope Works	351	49%
In-scope works	364	51%
In-scope breakdown		
Total in-scope audited	364	
Fully compliant works	84	23%
Works on Pathway to compliance	115	32%
Non-compliant	165	45%

The outcome of 45% is a significant level of non-compliance. However, upon further inspection of the 'non-compliant works' category, the owners of 141 works or 85% have ordered an AS4747 meter. That means, applying the same criteria NRAR has used in its previous two reports, the owners of only 15 per cent of the 715 in-scope works in Tranche 1 are non-compliant, i.e., have made no effort to comply.

Table 8: Tranche 1 works compliant rates as of 13 July 2021 categorised by NSW Catchment

Catchment	Full compliance	Pathway to compliance, no telemetry	Reasonable effort to comply	No effort to comply	TOTAL
Barwon	16	3	9	5	33
Border river	7	25	22	8	62
Gwydir	10	22	13	15	60
Lachlan	3	7	11	3	24
Macquarie	4	16	19	12	51
Murray	5	1	0	0	6
Murrumbidgee	17	11	3	0	31
Namoi	21	30	28	15	94
Other NSW including North Coast	1	0	0	2	3
TOTAL	84	115	105	60	364

³⁹ NRAR: Compliance State of Play <https://www.dpie.nsw.gov.au/nrar/how-to-comply/metering/compliance-state-of-play/> nocache.

In a media statement⁴⁰ on 13 July 2021, NRAR said:

“The state’s independent water regulator has found that while most pumps 500mm and above are now fully compliant, or on the pathway to compliance, with new metering regulations, there are still pumps not fitted with accurate meters.

A deadline of 1 December 2020 applied to all pumps 500mm and above, requiring they have accurate meters installed which are validated by a certified professional and can transmit water take to a central database.

Grant Barnes, Chief Regulatory Officer at the Natural Resources Access Regulator (NRAR) said he has seen an improvement in compliance rates over the past three months.

“We are encouraged to see a positive shift in the rate of full compliance recorded in April. We believe this positive shift is a result of our efforts to engage directly with water users.”

Statewide inspections by NRAR found 45 per cent of affected pumps were still not fitted with an accurate meter – the owners of these pumps will now be subject to enforcement action.

Mr Barnes expressed his concern that enforcement action was necessary and reiterated that there is more work to be done to ensure the accurate measurement of water take in NSW.

“The water users who own the 45 per cent of works without accurate meters are now subject to fines and directions to install them,” Mr Barnes said.

“We are a firm but fair regulator. We understand there can be challenges on the pathway to compliance and we have taken a light touch approach when reasonable efforts had been made.””

⁴⁰ [NRAR takes action as 45% of affected pumps not fitted with accurate meters - Water in New South Wales \(nsw.gov.au\)](https://www.nsw.gov.au/nrar-takes-action-as-45-of-affected-pumps-not-fitted-with-accurate-meters)

Inconsistencies in NRAR reporting approach

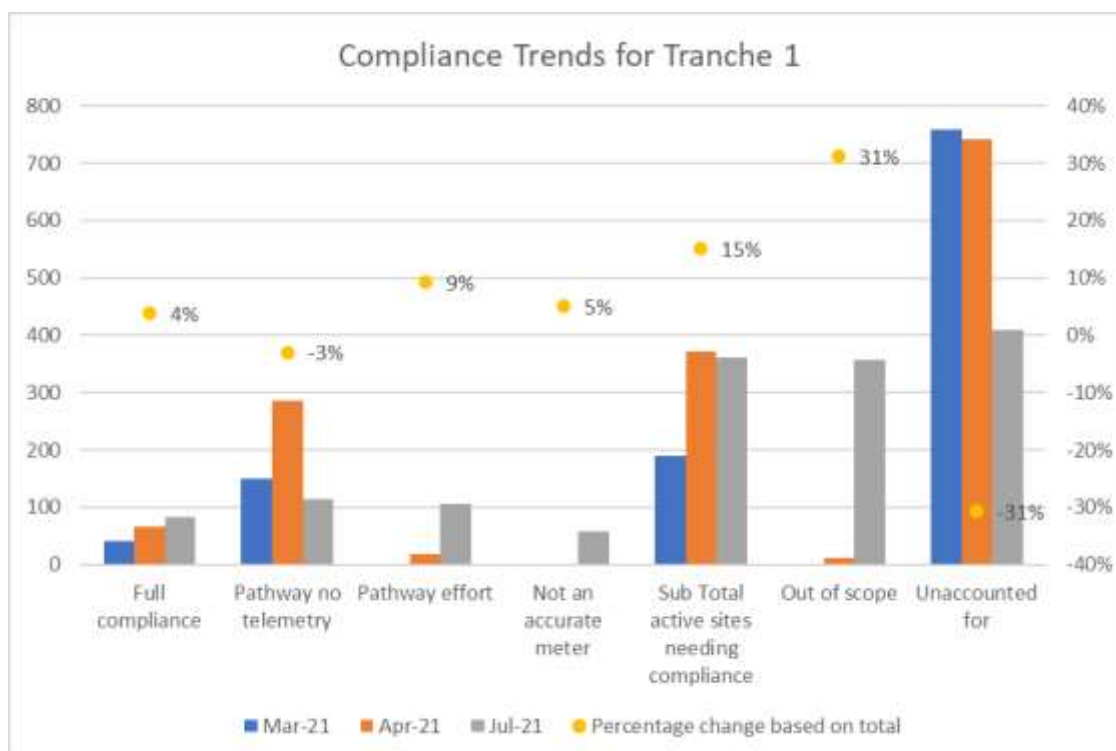
NRAR's inconsistent compliance status reporting has created significant confusion surrounding the statistics for industry and media, whilst adding concern regarding audit methods. Table 9 shows the compliance outcomes presented in the March, April and July NRAR status reports, indicating the percentage change.

Table 9: Sources NRAR compliance campaign results

	Mar-21	Apr-21	Jul-21	Percentage change based on total	Percentage based on total	Percentage based on active
Full compliance	40	67	83	4%	7%	23%
Pathway no telemetry	149	286	115	-3%	10%	32%
Pathway effort	0	18	105	9%	9%	29%
Not an accurate meter	0	0	58	5%	5%	16%
Sub Total active sites needing compliance	189	371	361	15%		
Out of scope	1	12	356	31%	32%	
Unaccounted for	759	743	409	-31%	36%	
TOTALS	1138	1126	1126	-1%		

This is also shown in the below diagram. Many of these changes between status reports have not been explained nor justified, or they are the result of verification of initial reporting (due to a lack of due-diligence in earlier reports).

Diagram: Compliance Reporting Trends for Tranche 1



There are a number of concerns that this inconsistent reporting raises.

Firstly, the publication of compliance data based solely on desktop studies without verification was considered inappropriate and not best-practice, particularly given how significantly that data has changed following further investigation and validation.

Secondly, the continual adjustment of the number of works sites in Tranche 1, from 1138 in March 2021, to 1126 in April 2021, to 364 in July 2021, has left industry questioning the validity of compliance rates.

This concern is heightened by 68% of the Tranche 1 being found to be either out of scope, or unknown – meaning NRAR have been unable to establish contact or information regarding this site. For those out of scope, that data should not have been included in Tranche 1 statistics, and thus highly skewed the data.

Thirdly, the refusal of NRAR to present recent compliance data categorised as ‘entities’ as opposed to work sites (as it did in its March report) has left the sector unable to accurately calculate individual compliance and non-compliance rates. Ultimately, it is the number of ‘entities’ that is more important and indicative of actual compliance, and reporting on sites leads to higher representation of non-compliance.

Further, NRAR audit techniques have been called into question with July 2021 farm-to-farm audits results revealing that 411 (36%) of the 1126 Tranche sites identified in the April report were not inspected at all because NRAR did not have the correct contact information for the owners.

This raises concerns with the accuracy of previous ‘desktop’ audits asserting compliance rates across the 1137 sites in the March report and the 1126 in the April report.

Media strategy and communications

NSWIC is, and always has been, a strong supporter of an independent industry regulator. The industry has zero tolerance for non-compliance, and values an independent regulator to enforce the rules and punish those who break them. NSWIC also fully supports transparency of the work of the regulator, including factual and accurate reporting of compliance and non-compliance data.

However, the industry has become deeply concerned through this recent process that reporting by NRAR has been inaccurate and misleading, and is presenting audit statistics in ways that inflate non-compliance of water users and encourages sensationalist and negative media coverage towards the industry.

For example, on 13 July 2021 the Sydney Morning Herald (SMH) reported *“Nearly half of the biggest irrigators in NSW have made no effort to install meters that comply with new water laws.”*⁴¹

Further, the ABC reported on 14 July 2021 a headline *“Almost half of NSW big irrigators have failed to properly install meters on pumps”*⁴².

⁴¹ <https://www.smh.com.au/national/nsw/biggest-nsw-irrigators-breaking-the-rules-on-water-take-20210712-p588za.html>

⁴² <https://www.abc.net.au/news/2021-07-14/irrigation-pumps-still-not-metered-nsw/100288628>

The media coverage by a number of outlets was sensational and left readers under the impression almost half of all irrigators do not have meters at all (i.e. not acknowledging this is an 'upgrade' with meters already in place, and only applies to Tranche 1 at this time, a small subset of the industry). The first anyone in the industry knew about this NRAR audit was what they (primarily industry body staff) read in the SMH that morning.

NRAR says its intention is to work with water users to improve compliance rates, and to encourage them to place orders for meters early and book DQPs, so that water users can demonstrate to NRAR they have genuinely made every effort to comply with the metering policy. If this was the case, then it would be expected that NRAR's media strategy would focus on delivering the audit results through regional newspaper, television and social media platforms – to reach their target audience. Instead, however, it chose to publish the story with the SMH, with a primarily urban readership whose knowledge of irrigated agriculture is shaped by largely negative coverage in urban media.

NRAR chose to focus only on the headline 45% statistic in its July media release, without providing the full context of its investigations, such as the number of works actually inspected compared with those deemed out of scope and those works whose owners could not be contacted. This detail changes the percentages significantly, and fails to provide the context.

Further, NRAR has also changed the way it classifies works. In April, it had three groups: compliant, on the compliance pathway, and non-compliant. In July, NRAR explained to industry it had split the compliance pathway into two subgroups, which then gave NRAR its 45% non-compliant headline number (Table 7).

The reasoning behind creating two sub-groups between compliance status reports has not been adequately explained, nor has the difference. Had those on the compliance pathway been grouped together as they were previously, the non-compliance rate is 16.5% of the 364 in-scope Tranche 1 works inspected, or 5% of the total 1126 Tranche 1 works. This is a very different statistic.

Additionally, the sudden removal of compliant or non-compliant entities, as opposed to work sites, in the July compliance status report prevents industry and media from determining the true compliance rate for water users throughout Tranche 1. As it is common practice throughout the industry for water users to have more than one pump site, it is likely non-compliance rates would be significantly smaller if divided into entities.

Thus, it is apparent that NRAR's chosen reporting methods exacerbate non-compliance statistics, and its chosen media outlets to report statistics reinforces negative public perceptions. We would like to think this is not deliberate.

Whilst NSWIC acknowledge that NRAR is not responsible for the media reports by third-parties, there is a reasonable expectation that the communication material by NRAR should provide an accurate, objective and factual representation of events, within the appropriate context. There is also a reasonable expectation that if media reports are inaccurate, that the regulator would provide the necessary corrections to ensure the public is not misled.

Conclusion

This report finds that a number of barriers are preventing Tranche 1 water users from achieving full compliance within the designated timeframes, and these barriers are beyond the control of the water user.

The impacts of the compliance barriers will be compounded as almost 10,000 more water users are captured by the Metering Policy in Tranches 2, 3 and 4.

Whilst it is the responsibility of the water user to be able to demonstrate they have taken all reasonable steps to become compliant, there is now a concerning situation in which full compliance remains impossible in many circumstances, or at best, is significantly delayed.

Urgent intervention by government and agencies is required to address these barriers. Ultimately, it is the responsibility of government to ensure their reform is deliverable, adequately-resourced, and that implementation barriers are promptly resolved.

Without intervention to resolve these barriers, there is an impending risk of policy failure. This poses a major risk to a significant and public interest reform, which the industry wants implemented as early as feasible.

Appendix 1: Letters by Industry Raising Issues

Item 1:



Mr Jim Bentley
Chief Executive Officer – Water
DPIE Water
Level 10
10 Valentine Avenue
Parramatta NSW 2150
Jim.Bentley@dpi.nsw.gov.au

20th April 2021

Sent via electronic mail

Re: Metering and Measurement Policy Implementation

Dear Mr Bentley

We write in belated response to your letter dated 18 September 2020 regarding our pre-emptive concerns on the achievability of metering compliance outcomes for the 1 December 2020 deadline, raised on 7 September 2020.

We have waited to respond largely to review the situation as the deadline passed, and to assess the situation as the next deadline for inland NSW surface water sites that are less than 500mm and gravity diversions, and the at risk groundwater sources which include the majority of northern NSW groundwater systems looms. As you are aware, the total number of sites for this 1 December, 2021 deadline is approximately 7,500.

Despite your confidence that in September 2020 “there are now no barriers to water users ordering a compliant water meter and local intelligence device” the compliance results indicate there are serious market failures in water users being able to be fully compliant. You indicated that the first roll-out date only affected 196 entities (for the nearly 1200 sites) yet as informed by Mr Grant Barnes of NRAR in March 2021, full compliance rates equate to only 3% meaning 97% of sites do not meet all aspects reform.

There are a range market issues driving poor outcomes, not only in compliance rates but also for operational (river and farm management), administrative and technology adaption in our region. We have listed some of these in the attachment to highlight the barriers that exist.

The culminating impact of these barriers, results in the majority of water users now, and many more into the future, relying on regulatory discretion from the Natural Resources Access Regulator. The fact that there are compliance requirements which cannot physically be achieved through no fault of the water users, is creating significant stress and anxiety. The need to document evidence of due effort at every step by duly qualified persons is also adding to their administrative burden, taking them away from ensuring meters are accurate and compliant.

Our concerns are three-fold:

1. The Department appears satisfied to set unachievable rules for water users, forcing them to rely on the regulator for discretion. How long, can the independent regulator continue to maintain discretion at such high levels of technical non-compliance?

Page 1 of 3

Border Rivers Food and Fibre - Gwydir Valley Irrigators Association - Namoi Water
- Barwon-Darling Water - Macquarie River Food and Fibre – Cotton Australia



2. Despite engaging in ongoing proactive engagement with the Department, our groups are concerned there appears to be insufficient Departmental priority placed on the metering reform policy challenges and the Department is insufficiently resourced to achieve the policy's intent. As evidenced by an inability to address market issues, ongoing internal administrative blocks, and the need to perform higher impact stakeholder engagement and communication, which was inadequate for the first roll-out date, let alone the upcoming deadlines.
3. The Department appears very likely to repeat this behaviour and the associated poor compliance outcomes with the implementation overly ambitious floodplain harvesting measurement policy due to start from 1 July 2021.

Our groups write collectively to you to highlight a significant impasse with the Department on the achievability of the reform objectives. Many of our members raised these concerns first-hand during the recent northern metering road show.

Our water users are committed to meeting requirements. We accepted the principles of the reform as a way to build public confidence and value add to our businesses, which cannot be achieved if the systems do not support improved farm management and the majority of the state relies on the regulators discretion. However, we need formal recognition by the Department that compliance is demonstrated by genuine effort and progress to the outcomes, rather than strict deadlines.

We call for an urgent roundtable discussion regarding the significant flaws of this policy to be discussed with relevant State and Federal departments, key duly qualified persons and our industry.

We trust that this feedback is of assistance in ensuring the continued implementation of the policy.

Yours Sincerely,

Brendan Warnock
Chair
Namoi Water

Zara Lowien
Executive Officer
GVIA

Ian Cole
Executive Officer
Barwon-Darling Water

Tim Napier
Executive Officer
BRFF

Michael Drum
Executive Officer
MRFF

Michael Murray
General Manager
Cotton Australia

Enc. Attachment A

CC. Minister for Water, Melinda Pavey, MP

Page 2 of 3

Border Rivers Food and Fibre - Gwydir Valley Irrigators Association - Namoi Water
- Barwon-Darling Water - Macquarie River Food and Fibre – Cotton Australia



Attachment A: Brief summary of identified issues and barriers to implementation.

Surface water:

- Limited pattern approved meter choice in above 1000mm
- Lack of pattern approved meters with flow rates higher than 260ml/day (259,200m³)—required for larger installations and gravity diversions. Mainly applicable for most gravity situations with a 1200mm pipe
- Questionable performance in some circumstances of newly installed pattern approved meters whereby they need to be operated in their upper band of flow rates.
- Until recently, lack of water availability to allow for required flow testing with a reluctance to start a meter just to flow test with low thresholds for over-pumping.
- Supply restrictions with COVID and increased demand on products.

Telemetry

- Lack of a multi-sensor LID option which is required for MACE meters being transitioned, estimated at 50% - 80% of existing meter fleet.
- Upload limitation of data type not suitable to farm management systems.
- Connectivity issue with no satellite connection option.

Floodplain harvesting:

- Lack of certainty over licence and requirements.
- Full water storages. Whilst some devices can be installed, there is sometimes no prior knowledge by the DQP about the structures under the water, which is not efficient as the DQP will need to re-check. This would also mean the surveyor will have to come back out to relocate position and height of the sensor.
- No device currently available off-the-shelf.
- No testing of devices with LID technology and both DQPs and water users, reluctant to order un-tested technology.
- Limited manufacture guarantee for gauge board requirements.
- Limited resources for benchmarking requirements by a surveyor.

Administration:

- Telemetry customers cannot manually enter in meter reads into iWas as required by their supplementary orders at the end of the event. This must be manually done via WaterNSW.
- DQPs must "document a reasonable effort trail" via email, the portal does not allow this. This is placing additional administration pressure on DQPs.
- DQP data entry is limited and clunky, often DQPs are abandoning data entry.
- No evidence of an approved Section 233, ministerial exemption being issued despite applications being provided.
- Inconsistency in application of solutions – encourage to engineer a manifold solution for multi-pipe sites but cannot implement an electronic manifold solution at no cost.
- Inconsistency with field staff to regulatory approach.
- Inefficiency of implementation, with barriers DQPs are making multiple site visits.

Item 2:



14 September 2020

The Hon Melinda Pavey
Minister for Water Property and Housing
 Parliament House
 Sydney NSW 2000

Via electronic mail

Re: NSW Metering Framework - Timeframe

Dear Minister,

Water, as you well know, is a complex and difficult space to work in and is a thankless task, and we thank you for your continued leadership on water issues.

We understand that the purpose of the new metering and telemetry framework is to improve the standard and coverage of non-urban water meters in NSW. We have always strongly supported the purpose of the new framework.

However, we are writing to express our concern regarding the potential for sections of our industry to be inadvertently non-compliant with the NSW Metering Standards through no fault of their own.

This letter is seeking your assistance to resolve the outstanding and urgent issues communicated on multiple occasions to the department, so that water users can comply with the requirements in place allowing the industry to move forward. A positive outcome for Northern Basin water users is to resolve these issues in a short timeframe so that the industry can demonstrate compliance.

Attached to this letter is our recent correspondence to the Natural Resource Access Regulator (NRAR) and the Department.

Over the last 18 months, we have contacted the department numerous times, yet these issues remain unresolved.

It is insufficient for both the department and NRAR to respond that those unable to install the required technology due to equipment or installer unavailability, will have their "effort" taken into consideration. Non-compliance is non-compliance and the regulator cannot be expected to take any other approach but to report the non-compliance publicly.

The main issue: is that the equipment supply chain, and subsequent installation and certification services are unable to provide satisfactory supply to meet the deadline (hardware and install services).

Page 1 of 3

Border Rivers Food and Fibre - Gwydir Valley Irrigators Association – Lachlan Valley Water -
 Macquarie River Food and Fibre - Namoi Water - - Cotton Australia



The cause: confusion amongst market suppliers over changing technical requirements, particularly in regard to telemetry, and an inability to secure stock from overseas suppliers due to Covid restrictions on manufacturing and freight.

The impact: Broadscale non-compliance despite best endeavours by all users to arrange meter replacement, to book certified installers and to purchase data logger and telemetry units when they finally received approval in the last two months.

This situation is highly likely to be exploited by industry opponents demonstrating our apparent 'resistance to having meters' and government's inability to regulate industry as promised.

The solution: If the market cannot supply suitable stock then an individual letter of exemption or "Pathway to Compliance" document is granted.

This process would involve the certified installer providing a written form to NRAR and acknowledgement by NRAR of the exemptions. These provisions should be granted until the market is able to provide the required equipment and the installers and certifiers are able to complete their tasks for ALL stakeholders.

This avoids the need for a blanket extension and allows the market time to procure the required technology.

As Government is well-aware the delivery of many manufactured products has been heavily impacted by Covid. There is a need for a formal process to cover the individual, it also provides for collection of data for each site to identify the main issue impacting compliance which will allow government to fully evaluate the blockage and pressure points in the system.

We would appreciate an urgent meeting with you and NRAR to discuss this option which is a more appropriate outcome than trial by media which is the usual outcome for Northern Basin Irrigators.

We remain committed to the deadlines.

Nothing would give the Northern Basin irrigators greater pleasure than to tell the media and the usual detractors that this issue is now closed.

Our members are committed to this reform and we look forward to completing it as soon as possible.

Your support to resolve this short-term issue is appreciated.

Yours Sincerely,

Item 3:



7 September 2020

Mr Grant Barnes
Chief Regulatory Officer
Natural Resources Access Regulator
Level 30, 4 Parramatta Square
Parramatta NSW 2124
grant.barnes@nrar.nsw.gov.au

SENT VIA ELECTRONIC MAIL

Mr Jim Bentley
Chief Executive Officer – Water (Deputy Secretary)
NSW Department of Planning, Industry and Environment

Jim.Bentley@dpie.nsw.gov.au

SENT VIA ELECTRONIC MAIL

Re: Potential Metering Non-Compliance

Dear Mr Bentley and Mr Barnes

We are writing to alert you to the growing concern about the potential for sections of industry being non-compliant with the NSW new Metering Standards through no fault of their own, and to hopefully find a solution as a matter of urgency.

Firstly, let us make it clear that we are not seeking an extension to the timeframes provided. We are fully aware of the perception that such a request would create in the public arena and we have been asking for the details of the metering reforms to be finalised for more than a year so that we could get on with the job. However, we are also more acutely aware than government that broad-scale non-compliance will not benefit our industry, the community, or the reputation of NRAR as a firm regulator and DPIE as an administrator.

All our irrigators want to be compliant today, but the equipment supply chain, and subsequent installation and certification services looks like making it impossible to achieve across the first category (northern basin, surface water >500mm) by 1 December this year. We have had regular pro-active engagement with NRAR and DPIE who are only able to provide the assurance that "in the event that irrigators are unable to have their installation upgrades completed by the due date, but can provide evidence that they have done everything in their power to achieve this date, *these circumstances will be taken into account by NRAR when considering the case.*"

We appreciate that this places NRAR in a potentially difficult position and we don't expect NRAR to commit to a course of action on compliance issues ahead of time, but this is no assurance that law-abiding irrigators will not be either prosecuted or other measures taken by NRAR, with all action

Page 1 of 4

Border Rivers Food and Fibre - Gwydir Valley Irrigators Association - Lachlan Valley Water -
Macquarie River Food and Fibre - Namoi Water - - Cotton Australia



now publicly available and open to misrepresentation. Unfortunately, irrigators will potentially be exposed to yet another round of public flagellation by elements of the media if NRAR or DPIE merely state the fact that there is broad-scale, technical non-compliance across an 'at-risk' area of the state, and the first target of the State government metering program. Who might be to blame for failing to meet the NSW Government requirements will not be considered as industry is forced back into the trenches for another assault by the usual suspects, feeding on the 'perception of guilt', regardless of extenuating circumstances. This will be a Public Relations disaster for the State Government, the Minister and the department responsible, as well as the industry stakeholders who just want to remain compliant and get on with life without Government authorities and frenzied media in their face.

The assurance that *"these circumstances will be taken into account by NRAR when considering the case"*, is cold comfort as industry is doing everything it can to be compliant but is being prevented by circumstances outside our control. Industry has a great deal to lose and currently, no way of mitigating the risk. Industry would have installed the required equipment a long time ago had they been approved and available, but they were neither until relatively recently (first telemetry unit in April 2020). We are now 11 weeks out from a deadline we have been telling NSW Government agencies for some time that we had no chance of meeting in full.

It is apparent that this cohort of irrigators (Nth MDB, >500mm, surface water) will be alone in confronting this issue as they are the first in line and the supply/install/certify industry and NSW agencies will have time to resolve some of their current issues before the next deadline is due in 2021.

We are seeking some direction from NRAR and DPIE on how such an outcome could be avoided.

We are in contact with our local CMI's and DQP's who advise us that they are having difficulties securing sufficient suitable stock of both meters and data-loggers and have been frustrated by the apparent constant shifting of goalposts and delays in technical specifications to allow for process like in situ testing to be undertaken.

Some of the issues we are aware of:

1. Low/no availability of approved equipment due to limited manufacturing activity and international freight capacity and cost due to Covid restrictions.
2. Delays in the approval process for pattern approved meters in the larger diameter pipe sizes, which are required by the 1 December deadline.
3. CMI's are reluctant to order equipment as the details of specifications appear to keep changing.
4. Preferred options being unavailable in sufficient time, leaving buyers with minimal choice from an inefficient and still-developing market.
5. Lack of physical water to certify installations with.



6. Limited capacity of CMI's and DQP's to service the required work in the time required, compounded by the increased administrative burden by the regulatory process and a reluctance to employ new staff due to the short-timeframe of implementation in the region.
7. Reluctance of DQP's to test installations where they are having difficulties to obtain a manufacturers certificate. Some manufacturers are reluctant to provide such certificates.

We propose that we convene a roundtable meeting (by videoconference) as a matter of urgency between DPIE, NRAR and a selection of the CMI's and DQP's encountering these matters to establish exactly the cause of the issues and to plot a solution. We note we are engaging in regular implementation meetings now with these organisations but consider these issues need to be elevated now given the tight timeframes upon us.

We would like to propose that DPIE and NRAR establish a documented "Path to Compliance" process that water-users can implement with their CMI or DQP to ensure their ongoing good standing with NSW government agencies and the public. We suggest that it include detailed options available, what they need to do as end-users, what CMI's and DQP's need to do and what NSW government agencies will do to support industry in staying compliant. This might consist of the water-user signing on to the process, CMI's and DQP's providing the details of steps required to meet the new regulations for each site and DPIE and NRAR approving these plans. Such a process would demonstrate industry's preparedness to be compliant, detail what is needed by all parties to achieve it and official approval by NSW government agencies to enable the deadline to be technically met, even if the equipment is not all installed. This step would also be used to capture progress, that is currently outside of the existing DQP portal.

Such a process would give water-users some protection and confidence that they can remain compliant with the new regulations in spite of current issues, as many believe that this process has been setup to fail.

We hope that by maintaining an open dialogue and collaborating as we always have, that we can find a solution to this problem that is not of our making, in the very near future and avoid a bad outcome for everyone involved

We look forward to your prompt response.

Item 4:

Level 5, 491 Kent Street,
Sydney NSW 2000

PO Box Q640,
Queen Victoria Building NSW 1230



Tel: 02 9264 3848
nswic@nswic.org.au
www.nswic.org.au

ABN: 49 087 281 746

Jim Bentley, CEO, Water (Deputy Secretary)
Department of Planning, Industry & Environment - Water
E: Sandra.sinclair@planning.nsw.gov.au

CC: The Hon. Melinda Pavey MP, Minister for Water
Grant Barnes, Chief Regulatory Officer, NRAR

15 April 2021

Dear Mr Bentley,

I write to you to express New South Wales Irrigators' Council's (NSWIC) deep concern with barriers to the roll-out of the new Non-Urban Water Metering Framework across NSW. The industry relies on the Department's processes and procedures being in order to avoid potentially damaging public perceptions about the industry's attitudes to compliance.

The Natural Resources Access Regulator's (NRAR) Chief Regulatory Officer, Grant Barnes, recently reported to NSWIC on the current state of compliance for Tranche 1 (Pumps >500mm). NRAR reports that a Duly Qualified Person (DQP) has validated just 15.8% of pump sites, and only 5.3% of meters with LID/telemetry have been installed and connected to DAS.

These compliance rates are concerning; however, more concerning remains the unachievable timelines, insufficient market capacity, issues with the DQP portal, and DAS connectivity issues. The barriers are frustrating water users' efforts to comply. It is essential that these barriers, which are not of the industry's making, are acknowledged if these figures are publicly reported.

As of January 2020 (Tranche 1 deadline: 1 December 2020), the MDBA had approved only seven close conduit meters, with only one approved meter for pumps over 1200mm. In addition, water users have waited up to six months for exemptions on non-pattern approved meters and are still without a determination.

The COVID-19 pandemic has further frustrated water users' efforts to comply and reduced market confidence. With only Aquamonix meters being manufactured here in Australia, water users are hesitant to purchase overseas made meters such as Khrono due to the lack of guaranteed supply and ability to maintain products given the current global climate.

The on-ground impact of delays and lack of market capacity is exemplified through a family farmer in the Lachlan Valley [name withheld for privacy] experienced in complying with Tranche 1 requirements. The timeline is as follows:

- 28/07/2020 – Organised site inspection.
- 24/08/2020 – Site inspection completed.
- 30/08/2020 – Quote accepted for Aquamonix meter.
- 31/08/2020 – Grower informed the delivery of the meter should take up to 6 weeks.
- 18/11/2020 – Grower informed the meter would be delivered by the end of November.

Secure – Sustainable – Productive

- 11/12/2020 – Grower informed that due to delay, the meter would be delivered by mid-January.
- 21/02/2021 – Grower was informed that meter wouldn't arrive until mid-March.
- 11/03/2021 – The grower was informed that there would be further delay due to telemetry and data logger installed at the factory.
- 16/03/2021 – No meter has been delivered.

This process has cost the farmer approximately \$20,000 and countless futile administration hours. This grower, like many others, has also been affected by the significant stress of the process, and the fears and anxieties of being non-compliant through no fault of their own, and despite their best efforts. The above experience typifies the great extent many farmers have gone to meet AS4747 standards but have been unable to, through no fault of their own.

As publicly acknowledged in numerous media releases and our submission on the *Draft Water Management Act Amendment (Metering) Regulation 2019*, "NSWIC supports the continued improvement of metering, monitoring and measurement actions for all water users across the state." The commitment of NSWIC remains today; however, NSWIC fears that such timelines for compliance in the current market conditions are unattainable.

While NSWIC is not advocating for any delays to the rollout, it must be acknowledged that this is an ambitious reform to deliver a world-leading high-standard metering framework, and there are obstacles beyond the control of water users to become compliant.

Furthermore, whilst NSWIC does support open and accessible reporting of government information, we acknowledge the importance of providing information in the appropriate context. Thus, NSWIC urges your recognition of these critical restricting factors to water users' compliance and to act now to develop a pathway forward to not bring undue harm to the irrigation industry's social reputation.

It is also essential for public confidence that the agencies describe to media the many other ways, such as satellite monitoring, that water take is measured in the meantime, particularly after the recent floods. This includes explaining that other forms of water take, such as river access and supplementary licences, is already metered.

I keenly await your response on the matter.

Yours sincerely,



Claire Miller, NSWIC CEO
 E: claire@nswic.org.au
 M: 0409 509 677