

Mr Chairman, fellow members of the Cork Region of Engineers Ireland and Guests.

And may I also welcome the Cork Environmental Forum to the meeting this evening as part of a celebration of the upcoming World Water Day.

Thank you for the invitation to address this meeting of the Region and speak to you about water charges and metering in Ireland. As you will appreciate, this is a very topical subject and what I say this evening will be a rough cocktail of one part experience, one part information and two parts speculation. Therefore I would advise caution. The most that anybody can do is interpret the facts as they see them; and not all of the facts may be apparent.

With that caveat, I will try to keep your interest for 45 minutes or so; and then I would be happy to take questions.

There are many excellent people working in the public and private sector on water services in Ireland; and nothing that I say here is intended as a slight on any individual or group.

KEVIN MURRAY



- Chartered Engineer
 - Civil & Structural
- Ex-Chairman - Cork Region Engineers Ireland
- Director - Cork Chamber (of Commerce)
- Principal - Kevin J Murray & Co Ltd
- 20+ years experience as a Consulting Engineer
- 10+ years experience in Water Pricing in Ireland
- Non-Domestic Water Metering Programme
 - Implementation & Guidance Notes

Very quickly, may I introduce myself:

I am a Chartered Civil & Structural Engineer, with almost 25 years experience as a consultant in Ireland and the UK. For the last ten years most of my time has been spent on the price and funding of water services in Ireland, since leading a team that prepared Model Agreements for the Implementation of Nation Water Pricing Policy for the Dept of Environment, Heritage & local Government in 2002.

Since then, while with a large multi-national consultancy, I led teams working on 8 non-domestic water metering contracts for 14 local authorities including the Dublin Region. I also wrote a set of Guidance Notes on Water Metering for the DEHLG and generic contract documents for DBO in water metering. I am now working as an independent consultant, in which context I have given (or am giving) advice to organizations at almost all parts of the value chain.

I am a former Chairman of the Cork Region of Engineers Ireland, and I have represented Engineers Ireland before the Joint Oireachtas Committee on the Environment investigation into water services. I am also a Director of Cork Chamber (of Commerce), where I was formerly the Chairman of the Transport & Infrastructure Committee. However, I am not representing either organisation this evening. The views that I will present are my personal views alone.

WHAT PAID FOR THIS?



Let me start this evening by asking a simple question. How did the Romans pay for the amazing water infrastructure that we can still see today?

Apparently water flowed continuously into a private home through a nozzle, the homeowner paying water rates according to the nozzle size. At the reservoir where the service pipe was attached, engineers installed a kind of ball float, resembling the modern type, to assure a reasonable steady flow of water. Each length of service pipe carried the subscriber's name to prevent any un-paying freeloaders from tapping into his neighbour's pipe.

Water infrastructure has to be paid for.

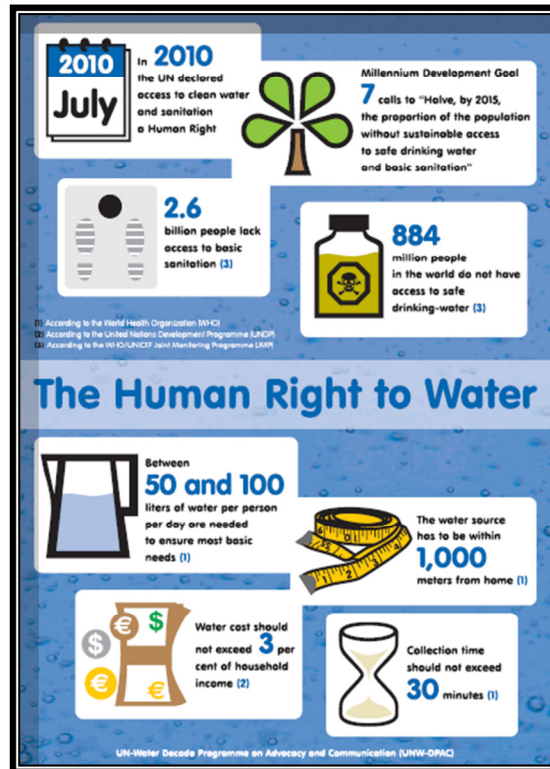
~~MEN~~ & WOMEN CARRYING WATER



The second thought I wanted to give you is how precious is water. How many women (and it is always women) spend hours each day walking many miles to bring water home for their families; and I am not talking about water that is compliant with the EU Drinking Water Directive – as the slide at the bottom right shows.

We are very lucky in this country and we insult so many people in the way we take water for granted. It is the first thing that we should be willing to pay for; not the last.

UNITED
NATIONS



In that context, perhaps it is worth reflecting on what is the right to water?

This is a pamphlet produced by the UN, which puts those rights in context. They are rights that so many people aspire to, yet we take for granted.

Out of interest, look at the item in the bottom left corner. Water should cost no more than 3% of household income. In an Irish context, if you had a family of 2 adults on jobseeker benefit and 2 children on child benefit, then the UN would suggest that they should be asked to pay no more than €687 per annum on water. A family with an annual income of €60,000 could afford to pay up to €1,800.

I think this is worth putting out there in the context of what we expect water charges to be for the average family; and what waivers will likely be granted to those that are considered vulnerable in Ireland.

ENGINEERS IRELAND / IRISH ACADEMY OF ENGINEERING



May I also invite you to look at a document recently published by a Joint Committee of Engineers Ireland and the Irish Academy of Engineering that considers the Delivery of Ireland's Water Services for the 21st Century, including the role of water charges and metering. I was very honoured to be invited to participate in the work of this committee.

This report formed the basis of the recent submission(s) from Engineers Ireland and the Academy to the Irish Government about the reform of the water sector in Ireland.

The report supports a key thesis of my argument this evening that direct universal water charges are essential for the proper delivery of water services; and water meters are important but not as urgent.

CONTENT

- ❑ Background / Context
- ❑ Non-Domestic Metering Programme
- ❑ Funding Gap

- ❑ New Era / New Policy
- ❑ Programme for Metering
- ❑ The Challenges for Metering
- ❑ Metering Costs

- ❑ Soapbox
- ❑ Closing Remarks



Right then. This is a quick snapshot of what I propose to talk about this evening.

(Read through the headings quickly)

THE WATER METER



SENSUS

But first, I think it is only fair to introduce the humble water meter.

(Pass the two Sensus meters around the room.)

Explain inline and concentric. [Acknowledge Sensus & Morrison Utility Services.]

Explain boundary box [Acknowledge Talis – Talbot Matrix.] – Why at boundary?

BACKGROUND / CONTEXT

- Housing Stock (2011) = 2,000,000
- Households on Public Water Supply = 1,350,000 est.
- Households on Metering Programme = 1,050,000 est.

- Non-Domestic Metered Customers = 225,000 est.
- Collection Rate: Between 55% and 85%?

- Public Water Supply = 1,600,000 m³/day
- Pipe Network = ~~25,000 km~~ 40,000+ km
- Unaccounted For Water = 48% and more?

- Budget: €1.6bn (2008) → €1.2bn (2011)

If we are going to talk about water services then we need to behave like engineers and try to get an appreciation of some of the numbers involved. These are some of the key numbers.

(Read through the numbers & identify some of the issues raised wrt data reliability)

However, the quality of the data is very poor. If you collect data through 34 organisations, you will never get consistent reporting. The rule of Chinese whispers will apply; and the data becomes unreliable.

RECENT HISTORY

- **1997:** Ireland abolished domestic water charges
- **2000:** EU Water Framework Directive
 - National Water Pricing Policy
 - Polluter Pays Principle
 - Full Cost Recovery
- **2003:** Non-Domestic Water Metering Programme
 - Sligo Pilot Project
 - Dublin Region AMR
- **2007:** Water Services Act
 - Prohibition on domestic water charges
- **2009:** Commission on Taxation
- **2010:** EU/IMF
 - Ireland is told to reintroduce domestic water charges

How has Ireland come to be in this position?

(Talk through the timeline)

So now we find ourselves where we have to reintroduce water charges at a time when so many people do not have the capacity to pay without making very painful decisions about what they have to cut out of the household budget.

There are two aspects of the recent history that I want to talk about. The first is the Non-Domestic Water Metering Programme; and the second is the Funding Gap that has been created by the dysfunctional funding structure we relied upon.

NON-DOMESTIC WATER METERING PROGRAMME

- We have substantially completed a non-domestic metering programme across 34 local authorities.
 - 225,000 (approx) meters installed.
 - Each local authority had its own approach;
 - A wealth of experience & knowledge – collectively;
- We need to draw together the lessons learnt from the non-domestic metering programme.
 - Notes for Guidance
 - The stakeholders are not exclusive to local authorities
- Concerns:
 - Difficulties identifying connections & customers
 - Quality of workmanship

As I mentioned earlier, we in Ireland have substantially rolled-out a non-domestic metering programme over the last few years. This is an excellent pilot for the domestic metering project – if the lessons are learned.

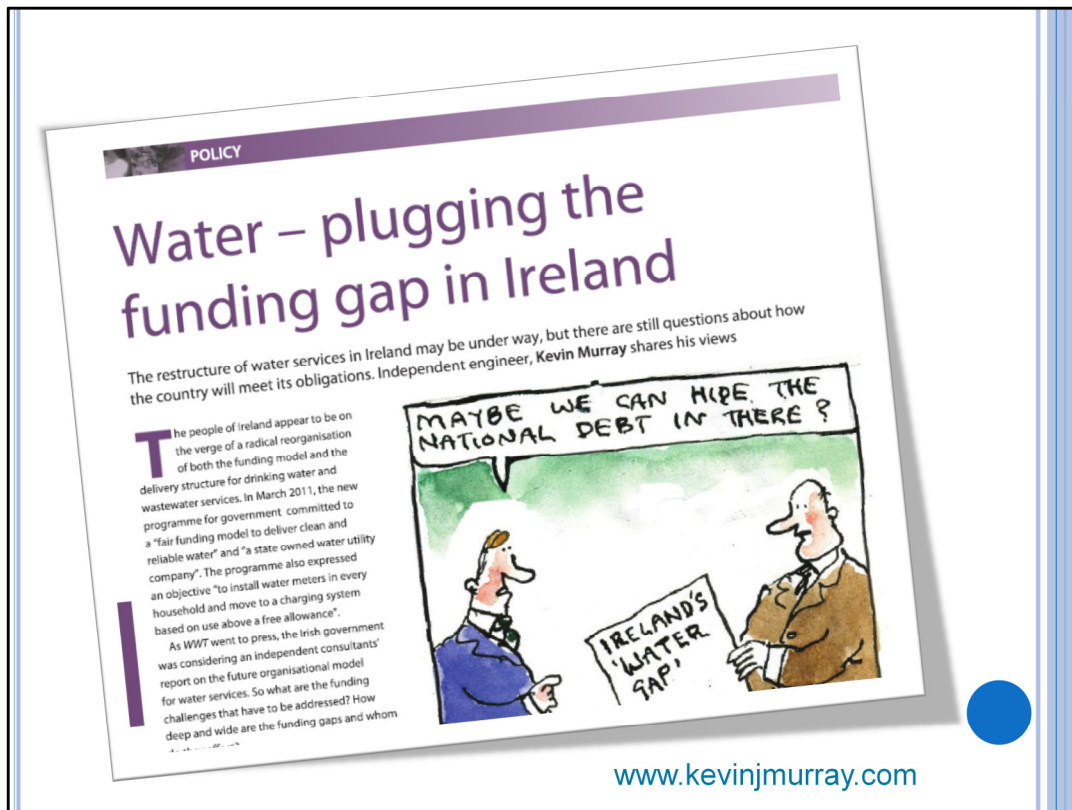
As part of that process, almost every local authority has taken a different variation on a theme:

- We have had design-build, private operators, client-managed, etc.
- We have different meters, different boundary boxes and different reading technologies. In Dublin there is an automatic reading system that has drawn UK water companies over to see the future of water metering!

We may be a bunch of contrary individualists or very good at tweaking a principle to suit our circumstances. Whatever, we have amassed a vast amount of experience; unfortunately it is scattered to the four winds. We need to draw that experience together. We also need to recognise that the experience is spread across the industry; not just in the public sector.

The NDWMP has demonstrated that local authorities do not necessarily know who is taking water from the public supply; and they certainly don't always know where the connections can be found. Just because you find a stop cock cover does not necessarily mean that there is a stop cock below or, if there is, that it is the control device for the nearest property.

The NDWMP also demonstrated that installation crews can be competent; or can be next to useless. There is great concern that enough skilled and experienced crews are simply not there. We have little evidence that those that are there are capable of doing a good job unsupervised. Training and Supervision will be crucial for the domestic metering programme.



I have recently written about what I have called the funding gap for water services in Ireland. This article was published last September in Water & Wastewater Treatment (Ireland Supplement) and is available from my website. I will refer to some of the themes covered in the article in this presentation today.

There is a funding gap in Ireland and it affects every part of value chain, from the aquatic environment through to the consumer.

I believe that the funding gap arises because those that provide the service are not paid directly by those that receive the service.

This disconnect robs the consumers of their right to take responsibility for their own water services. Some have become institutionalised in their own homes to the point that when a pipe bursts in their own property they turn to the local authority to fix the problem.

Who in their right mind would leave a house or business for a week in winter and not turn off the water at the stopcock?

WHO NEEDS THE FUNDING?



- Water Service Authorities
 - Service Delivery Needs
 - The Competent Authority
- The Construction Sector
 - 50+ months of contraction
 - Projects delayed; 5,000 jobs lost
- The Regulators
 - Economic Regulator
 - Quality Assurance & Building Control
- Innovation
 - Lost opportunities

First – Who needs the funding?

It is very easy to think that the funding gap is solely a problem for the water authority or utility that has to provide the water service.

That would be wrong – The funding gap affects different stakeholders.

..... Take each one in turn

Note: Water Regulator now on the Agenda.

CONSUMER'S FUNDING GAP

- The Home Owner also has a funding gap.
 - Needs financial help to make the home more water efficient; and benefit from cheaper bills.
- Water efficiency is a proxy for Energy efficiency
 - Extend the Home Energy Efficiency grants to include water efficient fittings.
- Water Conservation Schemes
 - Find a way of including the service pipe to the first tap.
- The Toilet Scrappage Scheme 2012

But then again, as I said earlier, there are a lot of stakeholders who suffer from the funding gap.

Not least, the Consumer has his or her own funding gap to address. All of us involved in the delivery of water services need the consumers to play an active and responsible part in the management of the water service within their property. If there is to be active management of the cost of water services, then those on the public water supply must take as responsible an attitude as those who rely on a private well.

But this needs some way of funding the customer. We know it works because private water companies incentivise customers in the UK to introduce water efficiencies.

---- *Follow Slide* ----

Part of the cost-benefit argument for metering is that it will encourage water conservation. This benefit will only be realised if it is accompanied by financial supports for water efficiency refit programmes. We also must be careful not to penalise those that can't afford to invest in water efficient fittings.



This is where we had got to by 2011; a water services sector with a broken funding model and a crying need for investment.

The incoming government issued its Programme for Government in March 2011 and it made several references to water services.

“To achieve better quality water and environment we will introduce a **fair funding model** to deliver clean and reliable water. We will first establish a new **State owned water utility company** to take over responsibility from the separate local authorities for Ireland’s water infrastructure and to drive new investment. The objective is to **install water meters** in every household in Ireland and move to a **charging system** that is based on use above the free allowance.”

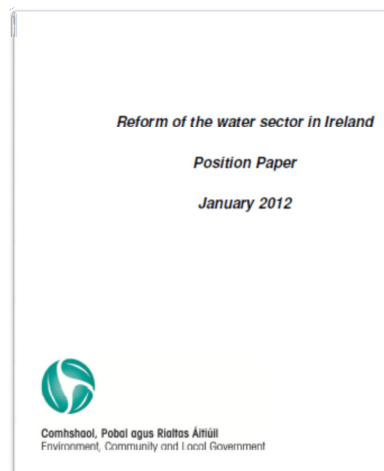
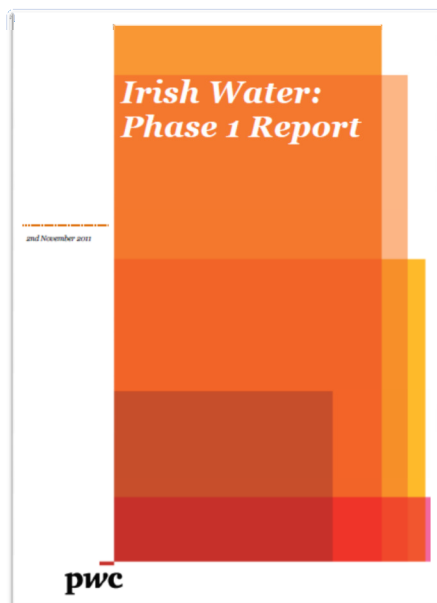
Government for National Recovery 2011 -2016



This is the critical section of the Programme for Government. It explains very simply how the Government intends to fund water services, to manage the delivery of those services, and the role of metering.

While the EU/IMF had instructed Ireland to introduce water charges and study the feasibility of consolidating water services, this programme commitment went further again. Within a couple of months, consultants had been appointed to look at the future of water services. Meanwhile the Department of the Environment began to look at how a domestic water metering programme might evolve.

PWC REPORT / DECLG POSITION PAPER



Last January the Department of the Environment, Community & Local Government released the Phase 1 report into the proposal to create what is known as Irish Water, a publicly owned national water utility company. This report was compiled by PricewaterhouseCoopers and contains a very useful summary of the challenges facing the Irish water sector today and into the future.

The report was released along with a position paper prepared by the Department that also gave a summary of the current situation and future challenges, along with a synopsis of the proposals for Irish Water and the programme for domestic water metering. The Department sought submissions and received over 300 submissions by the closing date of the 24th February.

For those that can withstand the pain, my own personal submission is a mere 4,000 words long and can be found on my website at www.kevinjmurray.com.

METERING PROGRAMME

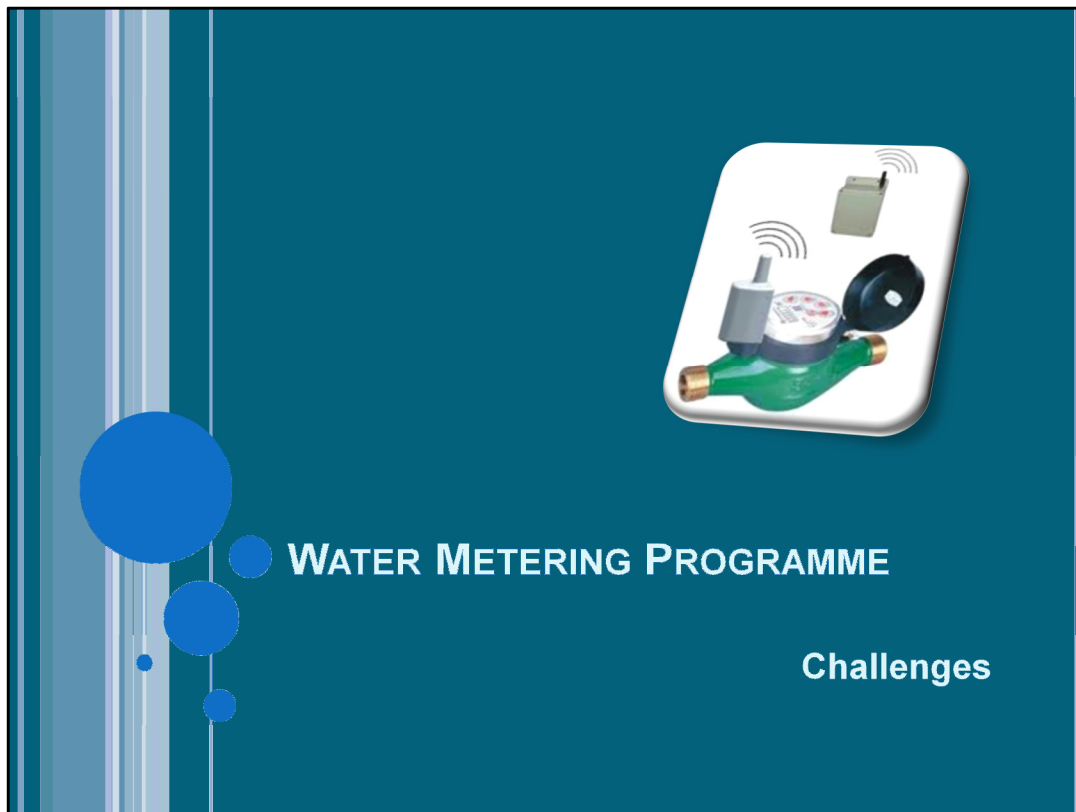
- Data Cleansing
 - Imminent?
- Surveys
 - Local Authority Staff to start in Q2/2012
- Procurement of Boundary Boxes
 - Tender in Q2 / 2012
- Framework(s) of Installation Contracts
 - Procurement to start before Q3/2012
 - Installation of boxes to start in 2012
 - Completion ?
- Procurement of Meters / AMR
 - For consideration in 2013
- Reading & Billing Contract?



So what are the current plans for the implementation of domestic water metering?
What is the programme? Is the programme achievable?

Note that this information is available from the Dept of Env Position Paper (Jan 2012)
and recent answers to Oireachtas questions.

.....



Let us look in some more detail at some of the challenges that can be expected to arise in the metering programme.

CHALLENGES - SURVEYS



- What is the purpose of the survey?
- Is it simply to identify the location of the connection?
- Is it intended to provide all the information to allow the meter installation to be designed?
- Is it intended to gather the customer information required for billing?

In my experience, nobody expects how much time and effort needs to go into the surveys.

But what is intended of the survey? Is there a need for different surveys at different stages?

I understand that the Department of the Environment is well advanced in the development of a basic survey form to identify domestic water connections that are to be metered. It would appear that this approach will seek to gather the minimum information required to tender an installation contract; and that a large share of the risk will be transferred to the Contractor.

Once appointed, the installation contractor will have to do further survey work to allow each installation to be designed. For example, if the existing stop cock is too shallow, the supply pipe may have to be lowered.

Most importantly, the installation contractor will have to ensure that all key customer and property data is gathered to allow billing solutions to be designed. We must anticipate some of the weird and wonderful plumbing arrangements that will complicate the billing process; such as properties with shared supplies. It may seem obvious, but you always have to prove that the meter is actually on the supply pipe into the nearest property; and not on the property across the road!

If this basic customer and connection survey data is wrong, then it will add huge cost and inefficiency to all of the meter reading and billing processes for years to come; and that hurts cash flow.

CHALLENGES – BOUNDARY BOXES

- What do we expect from Boundary Boxes?
- Trouble-free installation?
- Robust in real life conditions?
- Protect the meter & AMR?



The main part of the cost will not be in the procurement of boundary boxes. At €15-€20 a unit, the purchase cost will be small compared to the labour cost of installation (5 installations per day per 2-person crew). Therefore, we need boundary boxes that are easy to install and easy to check that they have been installed correctly.

I am grateful to John Horgan of Cork County Council for some of these photos of boundary box failures. Lid popped up due to water pressure; Lid sunken into frame; broken frame & water in chamber. They show some of the ways that boundary boxes can fail. It shows why the specification must be right, the location selection must be right (out of the way of high loads) and the installation must be right.

The installation of boundary boxes will need clarity of design objectives; comprehensive supervision; and well trained crews. I would certainly not depend on the expectation that a robust relationship between main contractor and sub-contractor alone will deliver a quality result.

CHALLENGES - CONTRACTS

- Control the Cost
- Meet the Programme
- Maintain the Quality



..... Project Management Triple Constraint

- Training
 - And not just water meter installer courses!

What are the challenges surrounding the installation contracts?

It appears that the Government is considering breaking down the boundary box installation programme into 150 – 200 smaller contracts of 5,000 to 10,000 meter installations each to help the SME sector to compete. This is a worthy aspiration but it can't be assumed that the SME sector will be ready to take advantage without some help. If the SME sector can't get access to sufficient numbers of experienced and qualified crews, then they will have to hand over the opportunity to those that can import resources from outside; and we will be exporting jobs.

The challenges for the installation contracts are the typical challenges of any project, i.e. cost, time and quality.

- Cost – If the pre-tender information is light, then the Contractors will be tempted to accept too much risk and they will be under pressure later to cut costs and quality.
- Programme – The programme outlined by the Government is already too ambitious. If Client & Contractors start into this project without proper planning then the programme will drag.
- Quality – Quality is set by the combination of sound specification, appropriate design, trained operatives, and adequate supervision.

If the government is going to create regional frameworks (which I think is a good idea) of contractors to bid for the individual installation contracts, then I would recommend that the opportunity is not lost to ensure that each contractor is required to send his crews to approved training before they can tender for the contracts. The government has a role to play here to ensure that approved training is available; and not just accrediting meter installer courses, but also to ensure that other courses necessary for working on public roads are available.

CHALLENGES – METERS / AMR

- Cash Registers or Network Controllers?
- Integrate with Non-Domestic Metering Systems
- Automatic Reading Technologies
 - Walk-by
 - Drive-by
 - Fixed Radio
 - Smart Grid
- Materials
 - Composite or Metal
- Battery
- Data Management



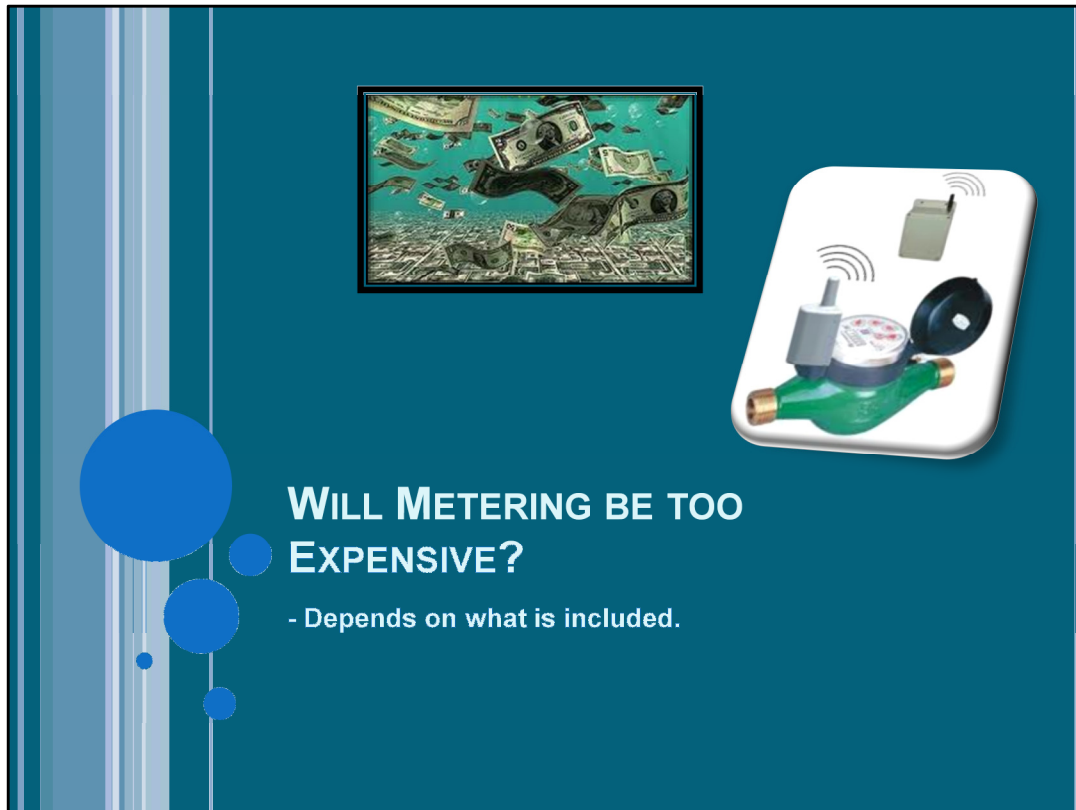
And what are the challenges to be faced with the meters themselves? Do we consider meters to be simply cash registers for billing or to have wider uses as part of network management and leakage control?

We are at a time of rapid change in water meter reading technology. When we started the non-domestic water metering project the choice had to be made between old-style meter reading (by eye and broken back); or walk-by and drive-by technologies. In many cases, the old style meter reader was retained. Today, the argument has moved on; and drive-by meter reading (i.e. the meter read automatically as the van drives past) is likely to be the accepted minimum solution.

At the same time, over the next 8 years, the Commission for Energy Regulation will be rolling out the Smart Metering Programme for gas and electricity meters. At what stage will it be appropriate to bring water metering into the smart meter fold? The technology is out there and is being used successfully.

We are seeing many manufacturers now changing from brass barrelled meters to composite plastics; largely because of the high cost of metals and the risk of theft. We are seeing improvements in battery life and meters with integrated radio technologies.

At the end of the day, the value in the meter is in its data collecting capabilities. This is where the value lies in the future – data management.



Time to move on. Lets talk about how much will the domestic metering programme cost and can we afford it?

At this stage I have to admit to being with the IMF on the water metering issue. Domestic water charges are essential; have metering by all means, but meters are not a pre-requisite for charges.

I did a little work into the likely cost of the water metering project, based on my own experience of the non-domestic metering programme and recent research among key stakeholders in the supply chain. I would like to share some of the findings of that work with you this evening.

GROUND RULES & CONSTRAINTS

- Scope Definition
- Lack of Sufficient Data
- Buried Liabilities
- Universality
- Budget Accountability
- Business Disruption Costs



Before looking at the costs of the metering programme, one has to look at some of the key assumptions and the constraints.

All Project Managers will know that scope creep is one of the biggest challenges and risks to budget on any project; and that applies here. I would also say that there is a general lack of credible data upon which to develop a budget; we need to do more studies to understand the costs.

Just for one moment think about the costs of mains rehabilitation. We are allocating €321m over 3 years on water conservation and mains rehabilitation through the WSIP programme, which is supposed to be sorting out just 1% of the water network per annum. Does that mean that there is €10bn of buried liabilities under the ground; ready and waiting to show its ugly face when we dig over a million holes to install meters?

We also have to think about what we mean by universality? How many of the customers are we going to meter? How many of the connections will we meter? Will we just do enough to target customer-side leakage and leave the rest to optional metering? Will we just do the easy ones – as indicated in the Position Paper published in January.

Then there is budget accountability. If, in the course of a metering programme, pavements get replaced en masse; is that a matter for the water metering budget or for the roads budget? If service connections have to be replaced, should that be allocated to the metering project or to water conservation funds? We have all seen how these games get played.

And finally, there are all of those business disruption costs. How much was lost by businesses in Dublin while the Luas was being constructed along the streets? Did I mention road opening licenses? Perhaps not.

WATER METERING COSTS (MATERIALS)

Item	Description	Rate	Quantity	Amount
	<u>Material Procurement</u>			
1	Domestic Water Meters (for installation in existing suitable boundary boxes)	€24.00	250,000	€6.0m
2	Domestic water meters, boundary boxes & fittings	€60.00	950,000	€57.0m
3	Automatic Meter Reading transponders (for Drive-By system)	€25.00	1,200,000	€30.0m
4	Contract Administration (Tender Process etc)			€1.0m
5	Storage			€1.0m
	<u>Sub-Total</u>			€95.0m

Talk through the schedule

WATER METERING COSTS (SURVEYS)

Item	Description	Rate	Quantity	Amount
	<u>Surveys</u>			
1	Desk Study of existing records	€100,000	34	€3.4m
2	Visual survey of properties & connections	€30.00	1,200,000	€36.0m
3	Invasive site investigations to locate connections	€250.00	50,000	€12.5m
4	Administration & validation of Survey Operation			€2.5m
5	Development of Customer & Connection Database and population of billing engine			€30.0m
6.	Migration of Non-Domestic Customer Records	€4.00	225,000	€0.9m
	<u>Sub-Total</u>			€85.3m

Talk through the schedule

WATER METERING COSTS (INSTALLATION)

Item	Description	Rate	Quantity	Amount
1	Preparation of Contract Documents, Tendering, etc			€2.0m
2	Labour costs (2-person crew) per installation (5 /day)	€90.00	1,200,000	€108.0m
3	Plant per installation (5 /day)	€40.00	1,200,000	€48.0m
4	Backfill and reinstatement (average urban/rural)	€40.00	1,200,000	€48.0m
5	As-built records	€10.00	1,200,000	€12.0m
6	Contract Management (Contractor Cost) & Profit			€25.0m
7.	Contract Supervision & Administration (Client)			€5.0m
8.	AMR installation (incl reading devices)	€15.00	1,200,000	€18.0m
9.	Attendances from local authority personnel			€20.0m
10.	Road Opening Licenses			€20.0m
	<u>Sub-Total</u>			€306.0m
	Total Water Metering Core Costs			€486.3m
	Add Contingency Costs	12.5%		€547.1m

Talk through the schedule

CONTINGENCY (EXCL. MAINS REPLACEMENT)

Item	Description	Rate	Quantity	Amount
	<u>Menu of Contingency Items</u>			
1	Replacement of lead service pipes between water mains and property boundary.	€2,000	25,000	€50.0m
2	Replacement of leaking service pipes between water mains and property boundary.	€2,000	50,000	€100.0m
3	Lowering of services pipes to achieve frost protection cover.	€500	60,000	€30.0m
4	Replacement of broken footpaths (beyond immediate area of boundary box installation).	€5,000	20,000	€100.0m
5	Repair of leaks in private properties	€1,500	30,000	€45.0m
6	Resolution of back-garden services & shared services	€2,500	50,000	€125.0m
	<u>Contingency Summary</u>			€450m

Talk through the schedule



KEY CUSTOMER FACTORS

-Is public opinion driving water metering?

Why is Ireland going to install water meters on every domestic connection? Are we doing it to cut the cost of water services? We would like to think so eventually.

However, it appears to me that the Irish people are being offered water meters and free allocations of water as a “sweetie” to hide the bitter taste of the medicine of water charges prescribed by the IMF. I don’t think that political analysis has really gone much beyond that until recently.

My point is this. If we fail to have a mature debate with the consumers about the practicalities of water charges and water meters then we will implement water metering the wrong way for the wrong reasons; and we will waste a great opportunity to add value to our water infrastructure.

VALUE FOR MONEY

- What is the price of equity?
- Annual metering cost
 - Installation cost (annualised) €40
 - Maintenance & Reading costs €10
- Customer Saving
 - 10% reduction in use €35

What is the benefit of having a meter if you can't reasonably reduce usage below the meter cost?



I want to give you a small example that illustrates a point about what I call “the price of equity”. Everybody accepts that metering is the fairest way to pay; however, metering has a cost.

In the Irish context, if metering is to cost at least €0.5bn, and the money is borrowed on commercial terms with interest to be paid back by the customer, then the annual cost to the customer could be €40 per connection (15-year pay-back). You can add at least another €10 per annum for the maintenance and automatic reading of meters – and a lot more if manual reads. That is €50 extra to be paid each year just for the benefit of having a meter.

So how much might you be able to save? Well studies in the UK show that metered users consume about 10% (long-run) less than unmetered users. Based on average water charges in Ireland, the average household might save €37.50 worth of water – less than the €50 cost of metering. Where is the benefit in equity?

In Scotland the Regulator has said that metering is not in the interests of the consumer; and in England/Wales, when given the option, 2/3rd of customers have chosen not to have a meter. Perhaps it is because, while meters can reduce your bill if you have the means to reduce consumption, they can also increase your bill if you use more water than the average.

In the long-run meters are useful, not least because they will help to control customer-side leakage; but it may very well be in the better interests of the consumer to accept a bit of pragmatic unfairness in the short-term; and allow for a longer timeframe for meter installation.

Potential savings from capturing customer-side leakage with metering = €50m pa; but must target properties likely to have leaks, e.g. back garden shared services.

FREE ALLOWANCE

“..... move to a **charging system** that is based on use above the free allowance.”

- Flanders Model:

- 15m³/annum/person (= 41 litres/person/day)
- 2012 Drinking Water Charge = €2.02 /m³
 - > Combined Water & Wastewater Charge in Dublin!
- Irish Family = €220 /yr (Water Only) → No allowance
- Flemish Family = €283 /yr (Water Only) → Allowance

- Costly to administer; Difficult to police;

- Would you register your PPS number?

Let me turn to the idea of a free allowance of water. I have great difficulty with this idea. I am suspicious of anything offered for “free”. In this case, I think that a free allowance of water is to water conservation, as “happy hour” is to temperance. I have no difficulty with a generous free allocation of water for those that are vulnerable, i.e. not more than 10% of the population, but I think that a universal allowance would be a costly disaster.

Those proponents of the free allowance refer to a scheme in Flanders, where everybody who is registered at a property is entitled to 15m³/yr of free drinking water (but not wastewater collection). That is about 25%-30% of the typical consumption in Ireland. However, I have looked a bit more closely at the Flanders example, and I have found that the 2012 water charge in Flanders is almost **twice** the average non-domestic water charge in Ireland. On that basis, even allowing for the free allowance in Flanders, a family of four in Flanders would pay almost **30% more** than a family in Ireland.

Furthermore, there is an administrative burden associated with the free allowance; and it would be costly to police the scheme to try to stop people claiming an excessive allowance. Why do we want to introduce this additional burden that will only increase the cost of water and make Ireland less competitive? Would it not be better to use this money to finance water conservation grant aid for domestic properties.

Alternatively, as the water bills will presumably have a standing charge component and a volumetric charge, the easier solution would be to reduce the standing charge for all connections. But is that fair?

HOW MUCH WILL WE PAY?

- Base on average non-domestic charges
 - Pressure not to increase from FDI sector
- VAT?
 - Assume zero rated
- Average Volumetric Charge €2.30 /m³
- Standing Charges: €100 - €200 /connection
- Family (4) consumption = 200 m³/annum
- Family Annual Water Bill = €560
- Fixed Costs & Variable Costs

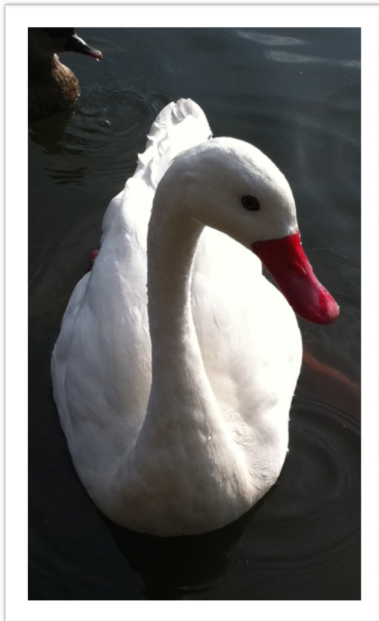
The big question for most people is what will be their water bill. I think that we can estimate that based on an assumption that average non-domestic water charges will be maintained in the domestic sector. There would be concern in the FDI sector if Irish commercial water charges started to increase above Northern European norms.

The average volumetric charge (water & wastewater) is about €2.30/m³. Standing charges vary from less than €100 to €200 per annum per connection. If we assume that a standing charge of €100 will apply, and a national volumetric charge of €2.30/m³, then a typical family of four consuming 200 m³/annum, would have a bill of €560. A couple in an apartment might have an annual bill of €330. No doubt the Government would seek to assist Irish Water to subsidise the water charge in the first couple of years after the introduction in 2014.

And for those (likely to be the majority) that don't have a meter by 2014? Then they may expect fixed assessed charges set by the Regulator based on average consumption.

It is worth mentioning that 80% or more of the costs of water services are fixed costs, i.e. they are the same whether you take a drop of water out of the tap. These are the costs of building the infrastructure and having the people employed to provide the service on demand. If people were to be charged on that basis, then two house side-by-side may have an annual fixed cost of €400 each, and a volumetric of €80 for one and €120 for the other who uses 50% more water. In other words, despite using 50% more water, her bill would only be 8% more than the more restrained neighbour. But that is no incentive to conservation, so the fixed costs have to be repackaged as a volumetric rate – if there are meters. What does it say about the sense of metered charges over fixed charges?

ABSTRACTION CHARGES



I want to close with a thought about a form of charging that is absent from Ireland at the moment, but may have a role to play in the future.

I want to mention abstraction charges; a charge paid by the utility company to the catchment authority to pay for the raw water that is to be used to make drinking water. Where the local authority performs both roles, such a charge does not exist; but if Irish Water is created to be the utility company, who will manage the catchments, and will they be given funding via abstraction charges to oversee the implementation of the River Basin Management Plans?

Typical OECD rate of 4 c/m³.

Recent EC opinion that Ireland should charge for large abstractions.

THE FUTURE OF WATER



To provide a professional and sustainable national drinking water service with outstanding customer service and well-managed infrastructure.



Ladies & Gentlemen. While acknowledging the huge progress made to improve water quality over the last decade, there remain huge challenges in meeting the requirements of the Water Framework Directive.

The introduction of water charges, not to mention water meters; alongside the reconfiguration of the management of water services; present the sort of challenges that you would prefer to take one at a time; not all together.

If we manage these developments holistically, then I would hope that we can achieve a vision of a professional and sustainable national drinking water service with outstanding customer service and well-managed infrastructure.



Chairman, Ladies & Gentlemen,
Thank you.