Central Iowa Regional Water Workgroup

Workshop #4

Valuation Concepts

October 26, 2017

FCS GROUP
Solutions-Oriented Consulting

Tonight's Agenda

1. Recap

2. What is Valuation?

3. Applying to our situation

Recap

Where We've Been

- **The overall vision for regional service**
  - Obligation to serve – general agreement that it should be a strong one
  - Right to serve – general agreement that exclusivity is needed
  - Ability to finance – general agreement that regional entity should have the ability to finance capital improvements & additions

- **Obstacles we've found along the way**
  - Independence – there are difficult constraints and conflicts between authority needed and authority available to meet the overall vision
  - Assets – actual authority to decide how to use the assets identified as key point

Ideas from our Last Discussion

- **We ended our discussion last time with some important ideas.**

- **Asset transfer is one of the possible paths forward**
  - One option was transferring the capacity from McMullen and Saylorville (perhaps some others) to the regional entity
  - A second option involved transferring all water production assets to the regional entity
  - These ideas challenge the Guiding Principles, but we seemed to agree that exploring these ideas was important regardless

- **Expansion of the DMWW Board of Trustees was another idea**
  - We will also explore expansion of the board at one of our future workshops

Guiding Principles

Ownership of Assets

No transfer or payment for existing production and core network assets would occur. Des Moines Water Works would continue to be the title owner of Fleur, McMullen and Saylorville Water Treatment Plants along with core network transmission facilities.

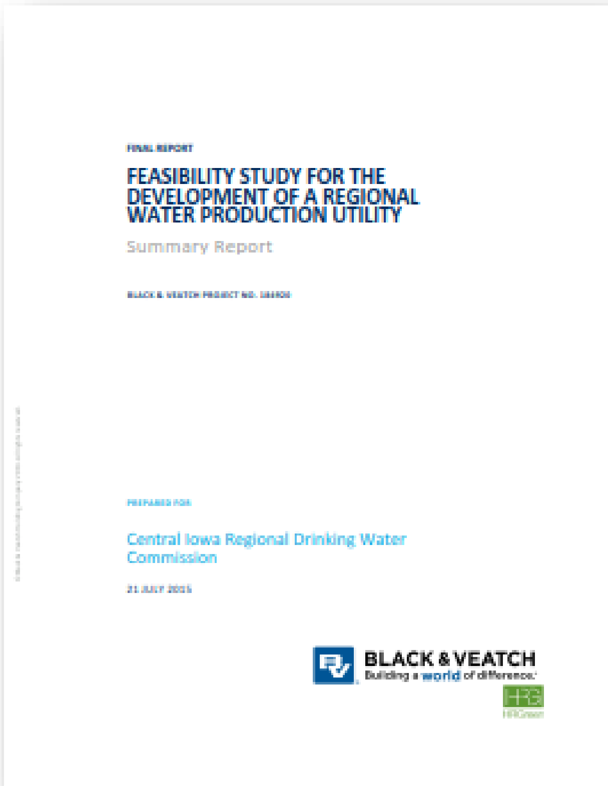
Existing production facilities that do not distribute water outside of a city's corporate boundary are not included in the Regional Water Production Utility nor governed by its Board.

New production and transmission facilities would be paid for by and be an asset of the Regional Water Production Utility.

Actual consumption or city/utility contribution to purchased capacity and future expansion of existing or construction of new production facilities may be significant factors considered in Governance Board representation.

1. What is Valuation?

Why we Need to Discuss Valuation?


FINAL REPORT

FEASIBILITY STUDY FOR THE DEVELOPMENT OF A REGIONAL WATER PRODUCTION UTILITY

Summary Report

BLACK & VEATCH PROJECT NO. [illegible]

PREPARED FOR

Central Iowa Regional Drinking Water Commission

21 JULY 2015

BLACK & VEATCH
Building a world of difference.

- Because you’ve been here before
- Why repeat the same discussion knowing it did not lead to agreement?
- There is a way to move forward

What is Valuation (or what it is not)?

- **Value is not a formula or a single point**
- **It very much depends on answering the question of "value to whom?"**
  - What is the *standard of value* ?
  - What *interest* is being valued?
- **In the end: it is what parties agree to**

Fair Market Value Standard

– *The price, expressed in cash or equivalent, at which property would change hands between a hypothetical willing and able buyer and hypothetical willing and able seller, acting at arms length in an open an unrestricted market, when neither is under any compulsion to buy or sell and when both have reasonable knowledge of the relevant facts.*

When most people talk about value, this is the definition they are using

Source: International glossary of valuation terms

Fair Market Value

- **Most valuation exercises are aimed at estimating Fair Market Value**

- **Fair market value has some serious assumptions**
  - Hypothetical market of willing and able buyers and sellers
  - Transacting an exchange of property
  - Arms length
  - Open and unrestricted market
  - Assumption of perfect information
  - Assumption of maximizing profit (or return on investment) – the “rational person” assumption

Other Standards of Value

- **Investment Value –** the value particular to a specific investor based on individual expectations and requirements taking into account unique synergistic premiums.

- **Fair value –** the price two specific parties may agree to taking into account the respective advantages or disadvantages that each will gain from the transaction

- **Intrinsic Value** - fundamental value of a business without regard to any market premium or discount

Question: Do you think Fair Market Value is what we are trying to achieve with the formation of a regional entity?

Source: International glossary of valuation terms

The Interest Valued

- **What is interest ?**
  - The specific asset(s) involved
  - Who holds the investment in those assets
  - What portion of that investment is being transacted

Question: What would you say is the interest that needs to be valued in our discussion on regionalization?

The BV Report

- **Standard of Value –** Not defined specifically, but FMV is referred to several times in the report. Other standards were not discussed.

- **Interest being Valued** – Not defined but the analysis includes multiple, separate interests combined into a single "merger" of interests.

- **Other issues**….

In the end, the conclusion of value was not something that the parties could agree to

2. Applying Valuation to Our Current Situation

Review Our Regional Goals

- **We want the regional entity to own water production assets**
- **We want any transfer of assets to accomplish two things:**
  - Least possible impact to the existing ratepayers in the region
  - Without financial harm to ratepayers

Let's Approach the Question Differently

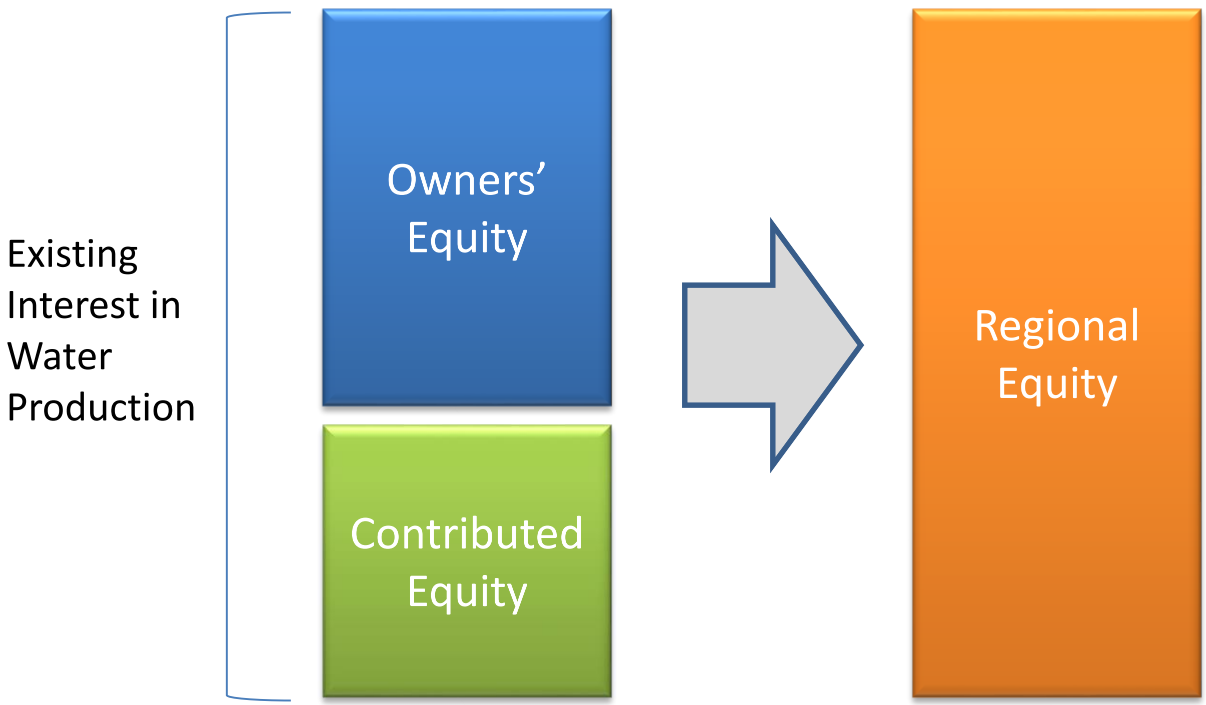
- **Standard of Value**
  - Suggest applying the Fair Value standard instead of FMV.
  - Why?
    - Because our situation is unique and we are not attempting to maximize profit from investments made in public infrastructure
    - Instead, we are trying to achieve a public good which aims at minimizing costs to ratepayers without causing financial harms
    - The relative advantages and disadvantages between the specific parties is more relevant to public decision making

- **Interest Valued**
  - The equity invested the water production capacity unused by the current ratepayers in the region (more on this later)

Whose Interest?

- **Where are the financial interests in the water production assets in this region? There are two kinds:**
  - ***Owners' equity*** – investment, net of related debt, attributable to the legal owners of the business assets. These are the Des Moines Water Works' ratepayers. Mostly, the non-Purchased Capacity customers.
  - ***Contributed equity*** – investment, net of related debt, made by parties other than the owners. Purchased Capacity customers.

What are we Trying to do?

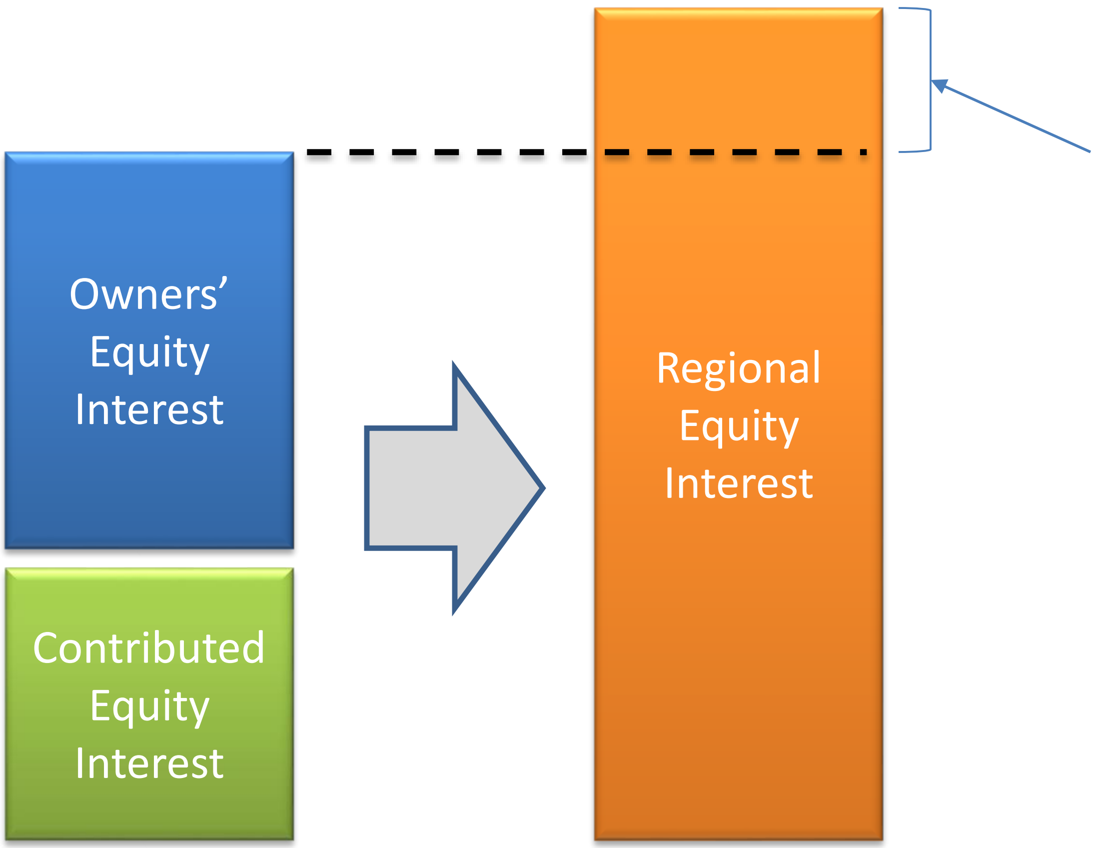


Transfer assets to regional entity with:

- least impact to respective ratepayers
- No financial harm to respective interests

Question: Are there other goals that need to be met other than those shown?

What if the Value Used is Higher?



If the transfer results in a new "value" for the assets **greater than** before the transfer:

- <u>All</u> rate payers can end up paying more for the same assets

Valuation Can Affect Ratepayers

<u>Result:</u>
The basis for rates increases

But….
Ratepayers did not change

Assets did not change

Therefore…
Ratepayers pay more for the exact same asset

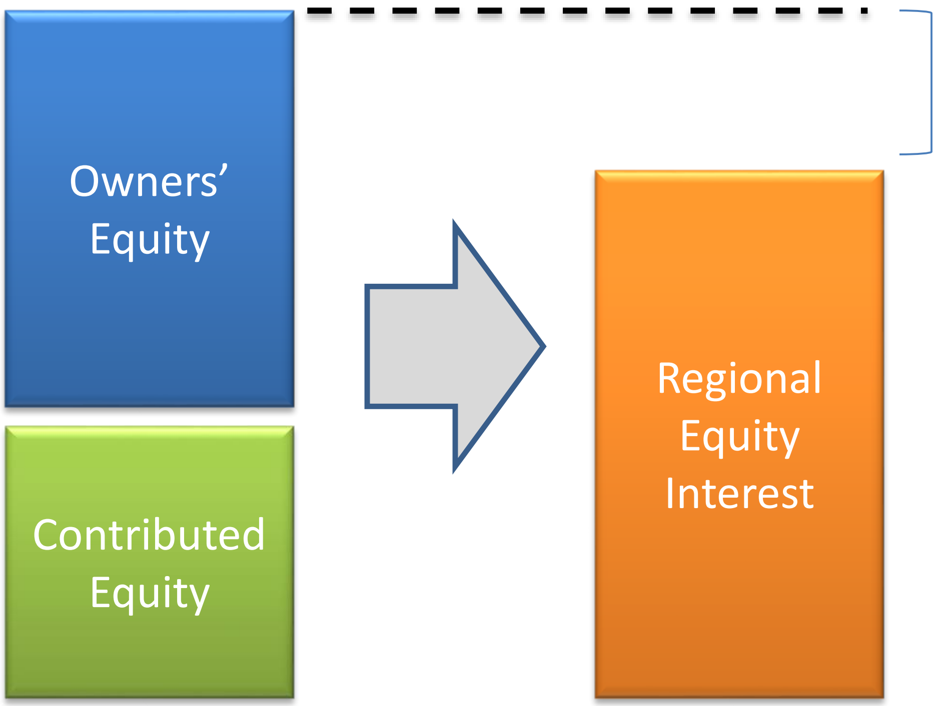
Example

An asset with a cost of $10,000 that is revalued at $25,000. The asset has a 10-year life and the rate of return is assumed at 5%.

	Before	After
Asset Value	$10,000	$25,000
Depreciation Recovered in Rates	$1,000	$2,500
Return on Investment Recovered	$500	$1,250
Total Capital Recovery in Rates	**$1,500**	**$3,750**

All else being equal, the rate for capital costs for this asset would go up 2.5x

What if the Value Used is Too Low?



If the transfer results in a new "value" for the assets **less than** before the transfer:

- <u>All</u> rate payers can end up paying less for the same assets – BUT
- Could cause financial harm
- Could result in under-recovery of cash needs (e.g. debt payments)

What Interest?

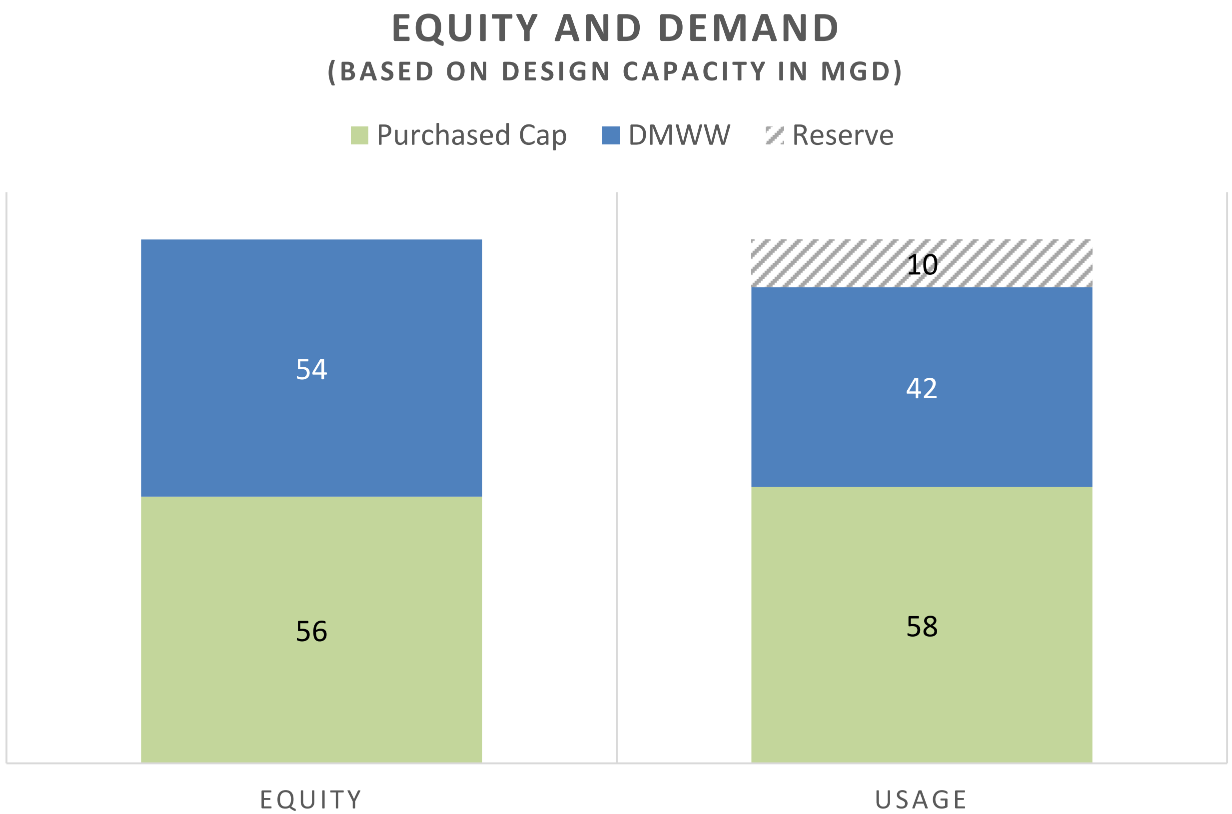
- **The interest we need to evaluate is the *capacity* in the existing water production. There are two varieties:**
  - ***Subscribed capacity*** – this is capacity that is already used to provide service to existing ratepayers, either those attached to the owner's equity, or those attached to the contributed equity.
  - ***Reserve capacity*** – this is unused capacity.

Some Assumptions

	DMWW	PCAP*	Total
Des Moines Design Production Capacity (MGD) (source: BV Report, Table 4-12)	54	56	110
- Operational Capacity (informational) (source: operational capacity of 3 WTPs)	49	56	105
Current Demand Levels (source: Long-range plan, Table 4-23)	42	58	100

*Purchased Capacity

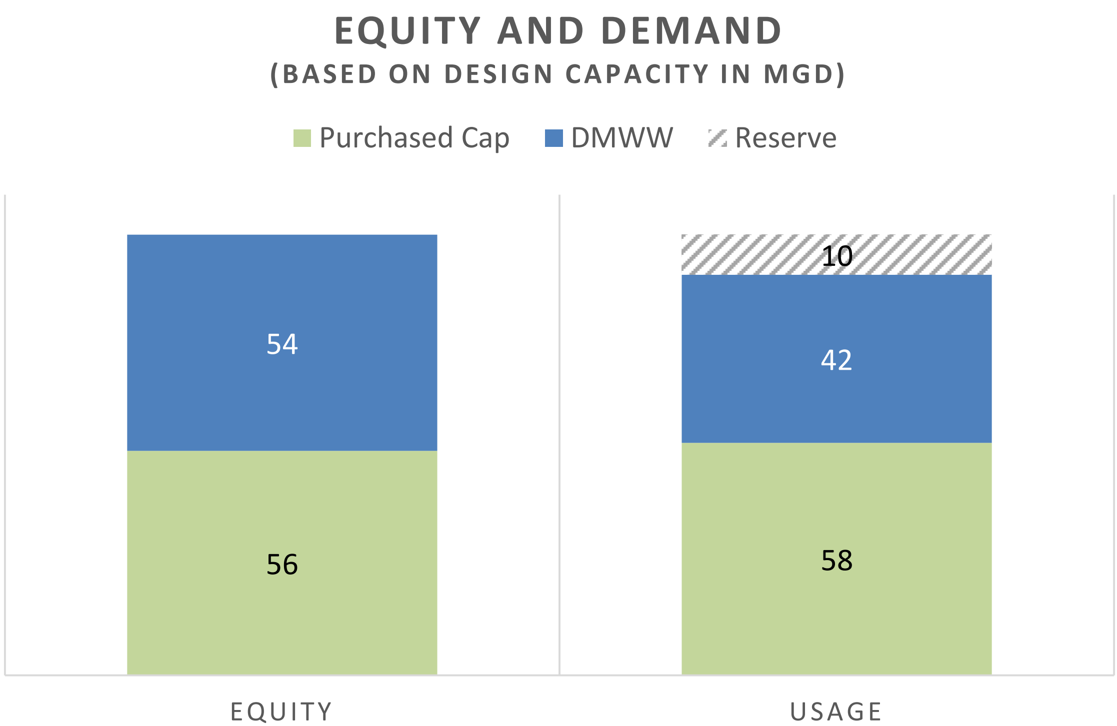
Where is the Reserve Capacity?



Source – BV Report, Table 4-12

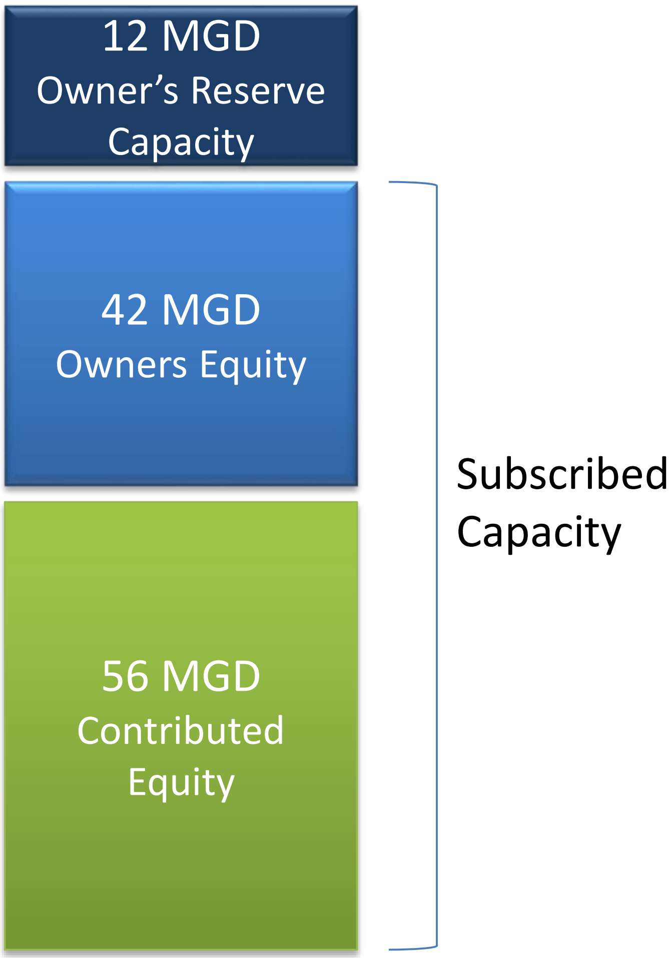
Source – Long-range Plan, Appendix A-1

Observations



- Purchased capacity < demand by ~ 2MGD
- Des Moines demand lower than equity position
- Reserve is unused capacity, plus overused = 12 MGD
- **Reserve capacity is owner's equity, not contributed equity**

What to do with Subscribed Capacity?



Suggested Approach:

- Contribute to regional entity as is
- At original cost net of accumulated depreciation
- Results in no impact to existing users (i.e. ratepayers)

Why?
Because this capacity is already being used, transferring it without revaluation locks in the costs and benefits and secures them as-is for existing customers

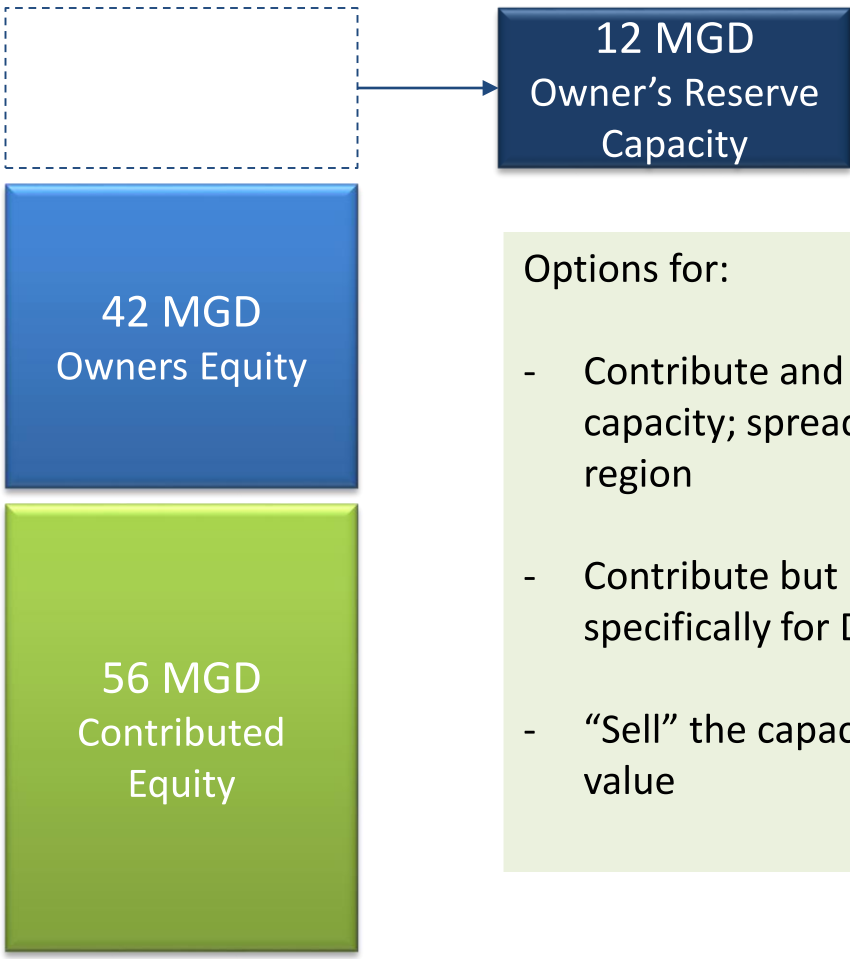
About the Reserve Capacity

- **Capital cost for that portion of the Water Production is:**
  - Absorbed, or "carried" by DMWW
  - Embedded in the rates
  - Other customers' rates are higher in order to carry the reserve

example (source: 2016 DMWW Cost-of-Service)

	DMWW – All Other	Purchased Capacity	Total
Depreciation Recovery ($ million)	$9.6	$4.0	$13.6
Annual Demand (mil. Gal)	7,369	7,128	14,497
$/thou. Gal.	**$1.30**	**$0.56**	

What to do with Reserve?



Options for:

- Contribute and allow region to subscribe the capacity; spreads capital cost recovery to entire region
- Contribute but reserve all or some of the 12MGD specifically for Des Moines
- "Sell" the capacity and "buy it back" at marked-up value

Contribute - Unrestricted

Reserve capacity is contributed to the regional entity with no restrictions on how it is used, and the capital cost recovery is averaged across all demands in the region instead of non-PCAP customers only

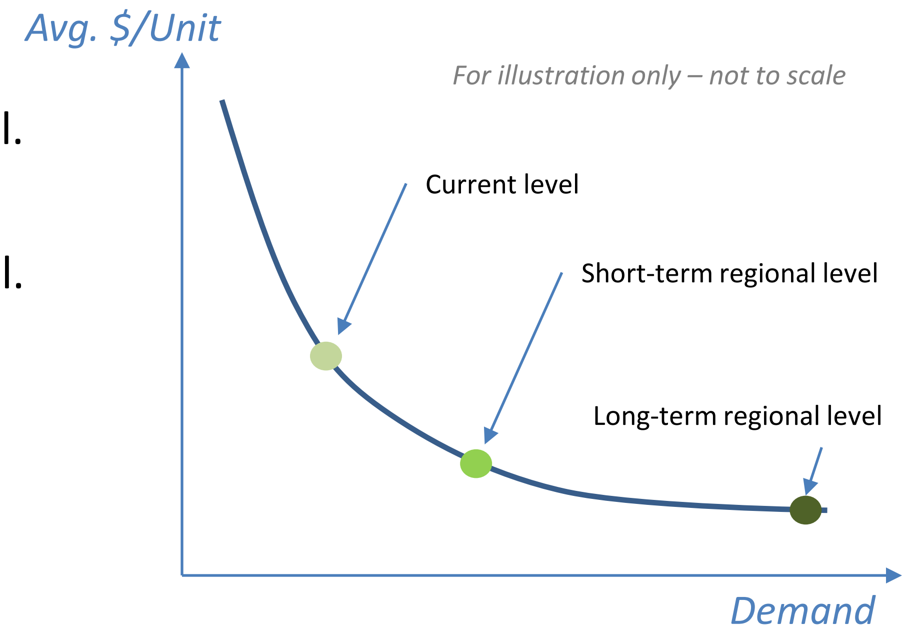
What that might look like immediately:

$13.6m / 14,497 MG = <u>$0.94</u> per 1,000 gal.

What that might look like at max subscription:

$13.6m / 15,950 MG = <u>$0.85</u> per 1,000 gal.

vs. $1.30 for DMWW customers other than PCAP
vs. $0.56 for PCAP



Increasing the scale results in lower avg. unit costs and decreases the risk of carrying reserves longer.

Contribute – Unrestricted Pros & Cons

Pros

- Reserve capacity is subscribed more quickly
- Removes the purchased capacity "limits" and related charges
- Avg. unit costs decrease for Des Moines customers (non-PCAP customers)
- Establishes the regional entity with assets to fulfill its obligations to serve
- Cost of curing operational capacity averaged across region

Cons

- Avg. unit costs for Purchased Capacity members would increase from present

Contribute - Restricted

Reserve capacity is contributed to the regional entity but some or all the reserve is restricted for the future use of Des Moines only

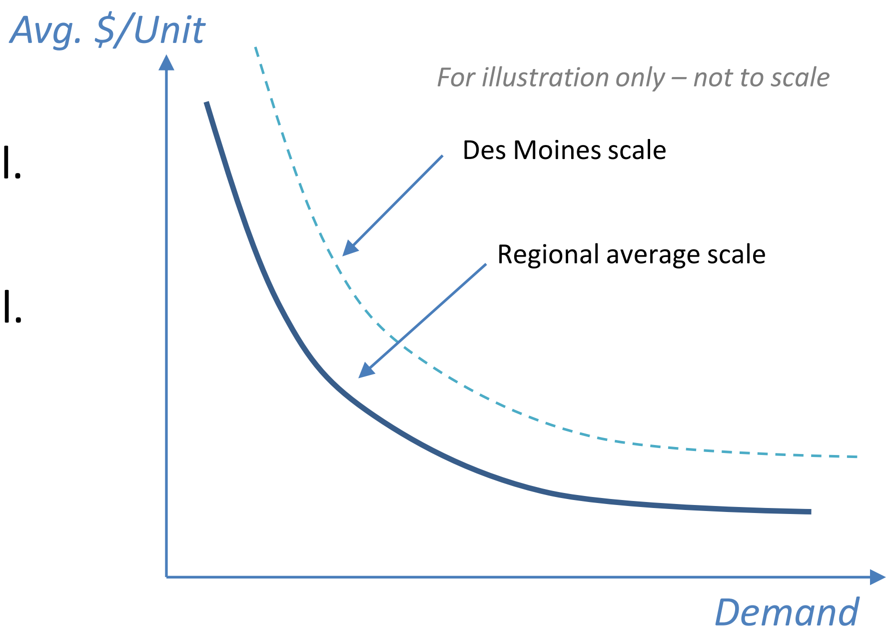
What that might look like immediately:

$9.6m / 7,369 MG = $1.30 per 1,000 gal.

What that might look like at max subscription:

$9.6m / 8,820 MG = $1.09 per 1,000 gal.

vs. $1.30 for DMWW customers other than PCAP
vs. $0.56 for PCAP



Des Moines would be able to control the remaining reserve, but does so with less scale, making avg. costs higher for non-PCAP customers.

Contribute – Restricted Pros & Cons

Pros

- Establishes the regional entity with assets
- Des Moines would have rights to least expensive capacity for growth

Cons

- Would require near-term investment in more capacity to meet Purchased Capacity member demands (growth)
- Reserve capacity is subscribed more slowly
- Makes regional cost recovery framework more complex
- Cost of curing the operational capacity is not regionalized

Sell and Buy Back – How it Might Work

Reserve capacity is "sold" to the regional entity with the cost of the sale spread among all regional customers, but with specific benefit to DMWW.

Financed for 30 yrs
@ 5% note

From DMWW

12 MGD
Owner Reserve Capacity

$50m at Original Cost^

To Regional Entity

12 MGD
Regional Reserve Capacity

$57m at Fair Value*

$3.7m

Annual payments from Entity to DMWW; could also be paid out as credit in rates.

^ rough estimate based on BV Report using original cost figures for water production assets

* rough estimate based on reproduction cost adjusted for deterioration (depreciation) and curable obsolescence of approximately $8m from review of improvement projects in the long-range plan

Sell and Buy Back

What that might look like immediately:
\$13.6m + \$3.7m / 14,497 MG = <u>\$1.19</u> per 1,000 gal.

What that might look like at max subscription:
\$13.6m + \$3.7m / 15,950 MG = <u>\$1.08</u> per 1,000 gal.

vs. \$1.30 for DMWW customers other than PCAP
vs. \$0.56 for PCAP

Possible additional <u>credit</u> for DMWW ratepayers:
\$3.7m / 7,369 MG = <u>\$0.50</u> per 1,000 gal.

- Additional possible credit
- Brings net rate to \$0.68/unit (\$1.19 - \$0.50 / unit)

Sell and Buy Back – Pros & Cons

Pros

- Reserve capacity is subscribed more quickly
- Removes the purchased capacity “limits” and related charges
- Avg. unit costs decrease for Des Moines customers (non-PCAP customers)
- Establishes the regional entity with assets to fulfill its obligations to serve
- Cost of curing operational capacity averaged across region

Cons

- Rate for Purchased Capacity customers increases
- More complex
- Requires parties to agree on a value