

DRAFT

TO: MCRC COMMITTEE
FROM: CHAD DEMAREST
SUBJECT: BID EVALUATION
DATE: 10/2/2006
CC:

This memo is intended to summarize four different options for evaluating bids. I intentionally do not draw many conclusions, nor am I providing a staff recommendation. With one exception, the costs and benefits are nearly identical—the differences between the options are distributional in nature (and, given the shortcomings of the modeling, these distributional impacts, like all economic modeling outputs, should be treated with a healthy dose of skepticism).

The decision will probably be based more on gut feel than on the analytic components of this memo – the unique aspects of each Option are difficult to model and, in some cases, are intended to mitigate behavior which cannot reliably be predicted. A generalized lack of faith in numbers has never stopped me from providing them before and it won't stop me now, but the upshot of the analysis is that there is little discernable difference in the modeled outcomes.

I would offer only two questions: which Option best meshes with the Buyout Objectives? And which best addresses the comments received at our public meetings?

Enjoy.

Description of the four Options

The four options are:

- (1) The “old” way – permit holders are told the value of their Premium Payment, and are asked to bid on the value of their groundfish portion of their business.
- (1a) Modified “old” way – as above, with a Premium Payment staggered based on DAS allocation
- (2) The “new” way – permit holders are asked to bid on the full value of their Premium Payment, and if their bid is accepted, it gets divided into “loan value” and “grant value” components.
- (2a) Modified “new” way – as above, but the DAS multiplier is removed from the denominator of the buyout score equation.

Pro's and (mostly) con's

OPTION 1

Option 1 has two potential downsides:

- (1) It favors those with high Premium Payments (PPs), because they can under-bid on their groundfish permit, increase their odds of getting accepted, and still collect a sizable chunk of change. Permits with low premium payments are forced to bid relatively higher to get the same total asset value out of their business, and are therefore less likely to have their bids accepted.

This problem is mitigated somewhat by the fact that high PP permits likely have lower DAS and will have to bid proportionally lower to get their bids accepted. And vice versa--low PP permits are more likely to have high DAS, and the more DAS you have the higher you can bid.

- (2) It has the potential loophole of allowing extremely low DAS boats to bid very low, get their bid accepted, and still collect a sizable PP check. This is fine, accept that it (a) doesn't accomplish much in terms of groundfish capacity reduction, and (b) is a mis-allocation of resources...if the government wanted to reduce capacity in those other fisheries, then it should design a program that does so in a targeted, cost-effective way. Doing so by paying the PP is haphazard and wasteful—without benefiting the groundfish fishery.

OPTION 1a

The modification that I propose to this option is to stagger the PP maximum value according to the permit’s allocated A & B DAS, such that, if you have a given number of A & B DAS allocated, you're premium payment is capped at:

<i>DAS</i>	<i>Y</i>
< 17.1	\$75K
> 17.1 <= 24.9	\$100K
> 24.9 <= 48.1	\$200K
> 48.1 <= 80.5	\$300K
> 80.5 <= 88	\$400K
> 88 <= 113	\$500K
> 113 <= 134	\$600K

OPTION 2

The "new" way of evaluating bids requires permit holders to bid "full value" for their permit, and subtracts out the Other Permits Payout (OPP) after the bid is accepted.

The buyout score is this:

$$\frac{\text{Bid (full business value)}}{\text{per-day-capacity-estimate * allocated DAS}}$$

The driver here is the allocated DAS. Because the bid is "full value" and not "groundfish

permit asset value", the odds of getting accepted are contingent on the number of DAS you're allocated (driving the size of that denominator).

This results in a polar opposite effect, relative to the "old" way...it favors the high-DAS permits for having their bids accepted, and is probably slightly more expensive for that reason (although this gets very tricky in the simulations because of the loan value-to-grant value ratio).

The downside to the "new" way is that it favors the high-DAS vessels and virtually locks out of the buyout all vessels with low-ish (say, under 50 allocated) DAS. I think this is a problem for two reasons:

- (1) It is likely to leave in the water a fleet of groundfish boats with lower average DAS allocations than pre-buyout...forcing those that want to be full-time groundfish fisherman to acquire more permits (which are now more dear) through the capital markets (a bank loan or shady loan shark), which is bad both because these folks are already paying the buyout fee, and because financing fleet consolidation through the capital markets forces permit holders to think short-term--got to pay the loan each month--versus funding consolidation and capacity removal via a lien on future landings, which allows permit holders to think long-term because the note is paid only when fish are landed.
- (2) It is likely to be more expensive because it fails to capture DAS (capacity) from those that might value their groundfish permits less than full-time, high DAS permit holders.

OPTION 2a

The modification that I propose for to address these problems is to remove allocated DAS from the buyout score equation. Under this scenario, the buyout score would be:

$$\frac{\text{Bid } (\equiv \text{full value})}{\text{per-day capacity estimate}}$$

The denominator now does not favor high-DAS allocations, but it does scale for vessel size.

The ratio of premium payment to loan value will reflect the businesses' reliance on groundfish (for which DAS allocations are a proxy), and the end result is a buyout that eliminates the DAS buyout, but does not actively target DAS as well as the other three methods proposed here.

Impacts of the four Options

Analysis for all Options uses the same modeling and simulation methods that I've used thus far. Details can be found at the website on the "downloads" page under "Capacity Reduction Analysis Methods."

I'm going to discuss impacts in three ways:

- (1) Benefits
- (2) Costs
- (3) Distributional impacts

BENEFITS

The benefits of all options are measured here in terms of the metrics we've been tracking all along (Table 1, Table 2).

[*Note: see Figure 1 thru Figure 4 at the end of this memo for the complete graphical results of the simulation runs.*]

The results show that the four options produce roughly similar benefits. The obvious deviation is Option 2(a) which, as predicted, fails to target DAS and hence overall capacity, as well as the other three.

The predicted benefits of Options 1 and 1(a) are nearly identical for one very obvious reason – the modification in 1(a) is intended to prevent people from doing something that the model doesn't predict they'll do—that is, underbid on their groundfish permit's value. The model is set up such that those with high PPs bid a significant amount to reflect the appropriate market value of a groundfish permit, and consequently their bids are not accepted in the model.

Table 1 – Comparison of relevant metrics (total #) across the four Options (avg. of between 300 and 600 bids submitted)

Option	# permits retired	# capacity retired (capacity units)	# A DAS retired	# active DAS retired	# latent DAS retired	# leasee DAS retired	# history retired (lbs groundfish)
1	316	51,034,496	15,972	13,131	5,956	-2,406	93,336,194
1(a)	314	50,929,642	15,981	13,160	5,987	-2,384	93,677,998
2	323	52,176,987	16,248	13,053	6,178	-2,561	94,295,920
2(a)	367	47,680,088	15,647	11,611	7,193	-2,098	83,319,739

Table 2 - Comparison of relevant metrics (% of total) across the four Options (avg. of between 300 and 600 bids submitted)

Option	% permits retired	% capacity retired	% A DAS retired	% active DAS retired	% latent DAS retired	% leasee DAS retired	% history retired
1	31%	37%	36%	41%	31%	32%	41%
1(a)	31%	37%	36%	41%	31%	32%	41%
2	32%	38%	37%	41%	32%	34%	42%
2(a)	36%	34%	36%	36%	38%	28%	37%

COSTS

The costs associated with these four Options are measured in two ways: the grant value commensurate with each Option (Table 3) and the per-unit-capacity costs (Table 4).

The costs associated with Option 2(a) are slightly higher, presumably because this option removes more low-capacity vessels than the other three. Otherwise, costs are very close and it may be difficult to differentiate between Options on this basis alone.

Table 3 – Grant total costs (avg. of between 300 and 600 bids submitted)

Option	Vessels removed	Grant total	Loan total
1	315	\$24,562,460	\$99,792,620
1(a)	314	\$24,009,034	\$99,598,977
2	323	\$22,474,054	\$99,776,638
2(a)	367	\$26,781,748	\$99,713,657

Table 4 – Per unit capacity costs (avg. of between 400 and 600 bids submitted)

Option	Per-unit-capacity cost
1	\$1.85
1(a)	\$1.85
2	\$1.79
2(a)	\$2.01

DISTRIBUTIONAL IMPACTS

The distributional impacts are measured in terms of the number of permits bought out from each homeport state and by vessel class. Here is where the differences between these options begin to truly emerge. Options 1 and 1(a) tend to capture their capacity from fewer, larger vessels (as shown in Table 3 as well). The capping of Premium Payments in Option 1(a) is responsible for the lower reduction in the southern areas (CT, RI, NY, NJ and VA)—this demonstrates that, while the two Options realize similar costs and benefits, they do so with a different mix of permits purchased. Given the fact that these two Options have roughly equal costs (see Table 3, Table 4 above), the purchase of vessels presumed to be more heavily impacted by the regulations may be viewed as a positive effect.

Options 1 and 2 appear to be quite similar, but remember that Option 1 (the “old” way) was changed (Option 1(a)) to accommodate a behavior that these models cannot predict.

The greater number of low-capacity permits for Option 2(a) is evident in Table 6.

Table 5 – Number permits removed from each homeport state

	CT	DE	MA	ME	NC	NH	NJ	NY	RI	VA
Option 1	6	2	175	44	1	18	19	23	30	2
Option 1(a)	3	4	201	59	2	22	6	5	28	0
Option 2	5	2	182	45	1	22	16	24	27	2
Option 2(a)	7	1	201	49	4	32	24	28	25	3

Table 6 – Number permits removed from each length class

	Class 1 (< 29 ft)	Class 2 (30 – 54 ft)	Class 3 (55 – 74 ft)	Class 4 (75+ ft)
Option 1	3	135	89	93
Option 1(a)	1	142	86	101
Option 2	4	154	81	87
Option 2(a)	5	215	109	45

Figure 1 – Option 1 simulation results

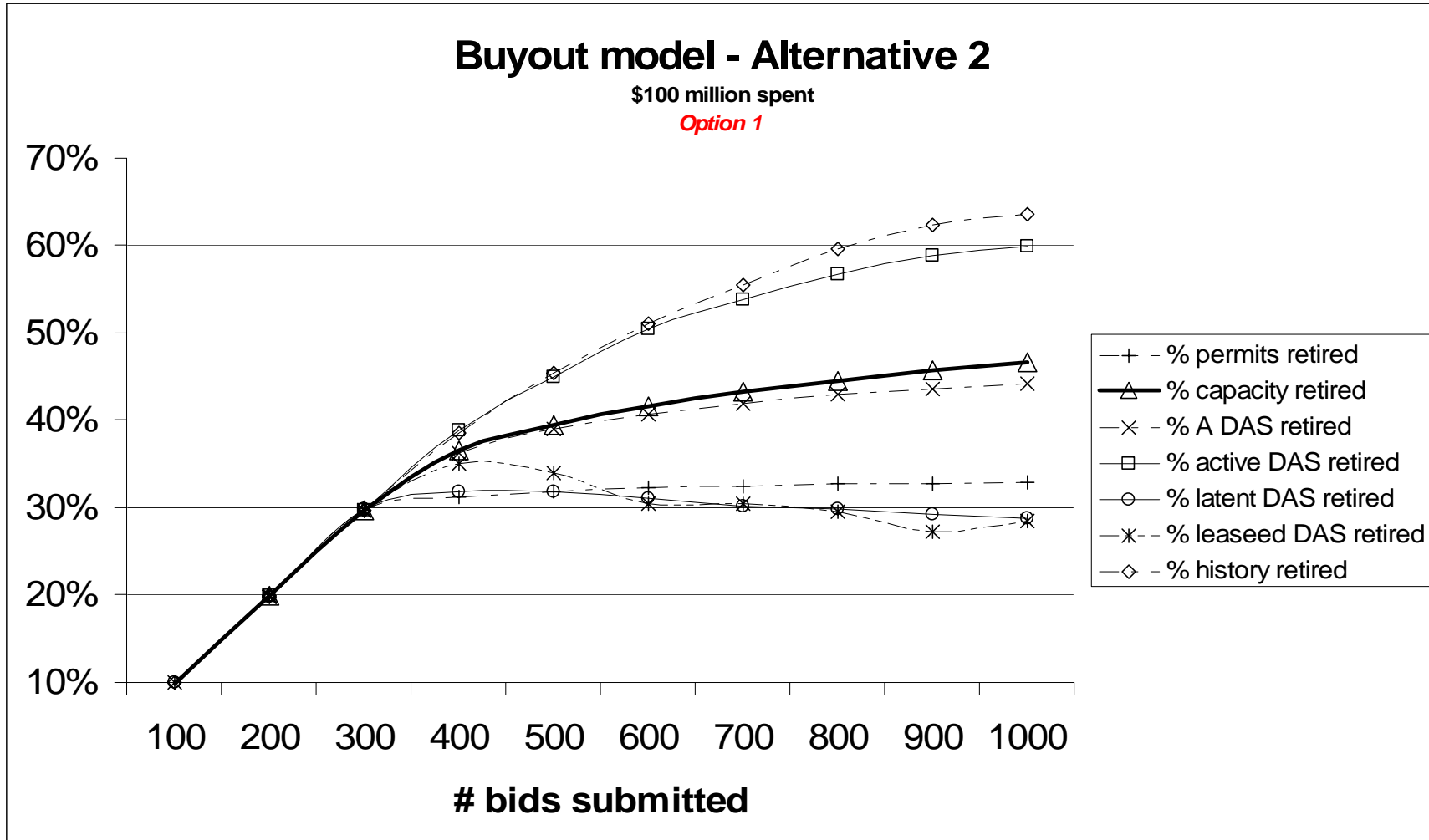


Figure 2 – Option 1(a) simulation results

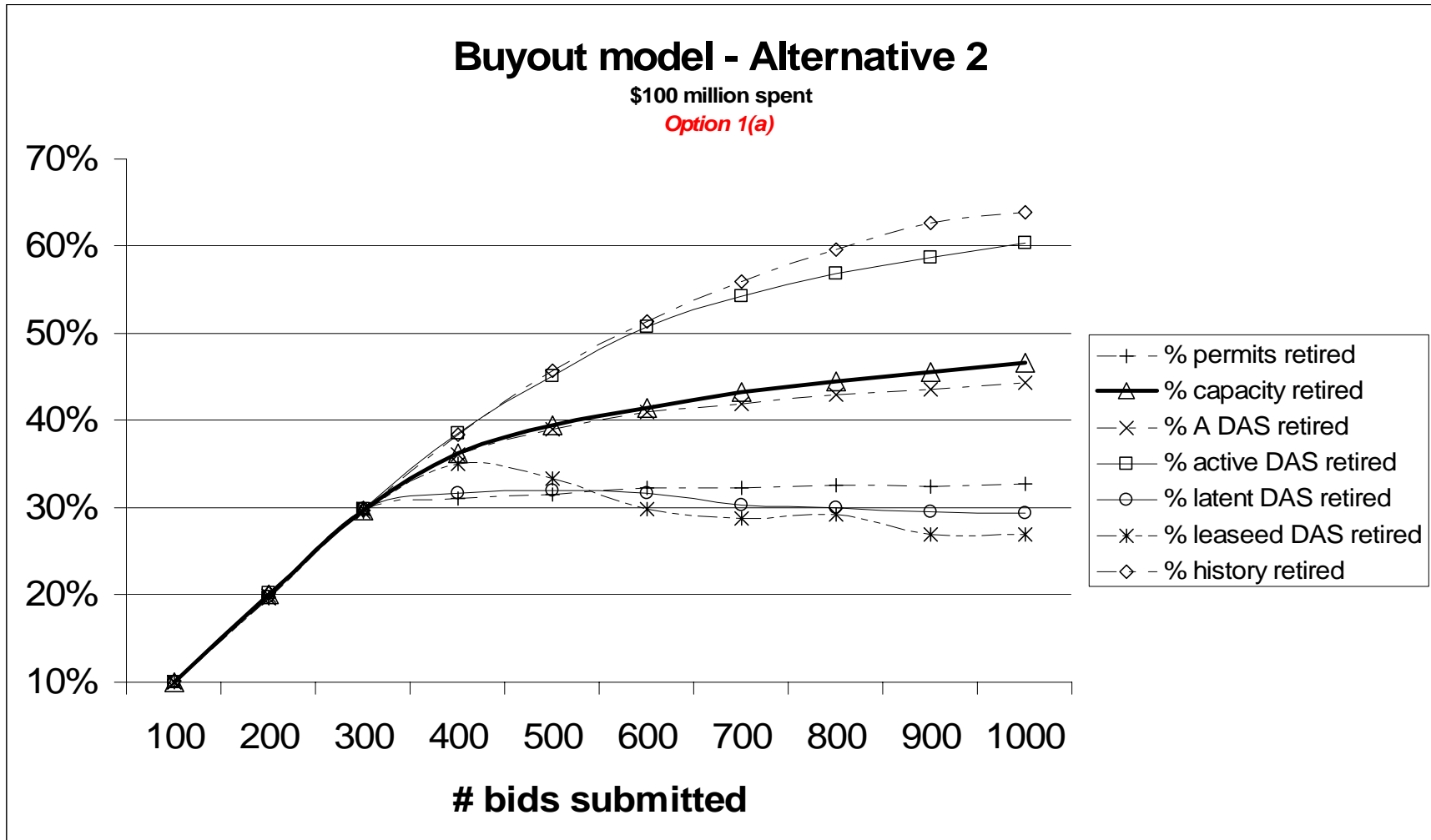


Figure 3 – Option 2 simulation results

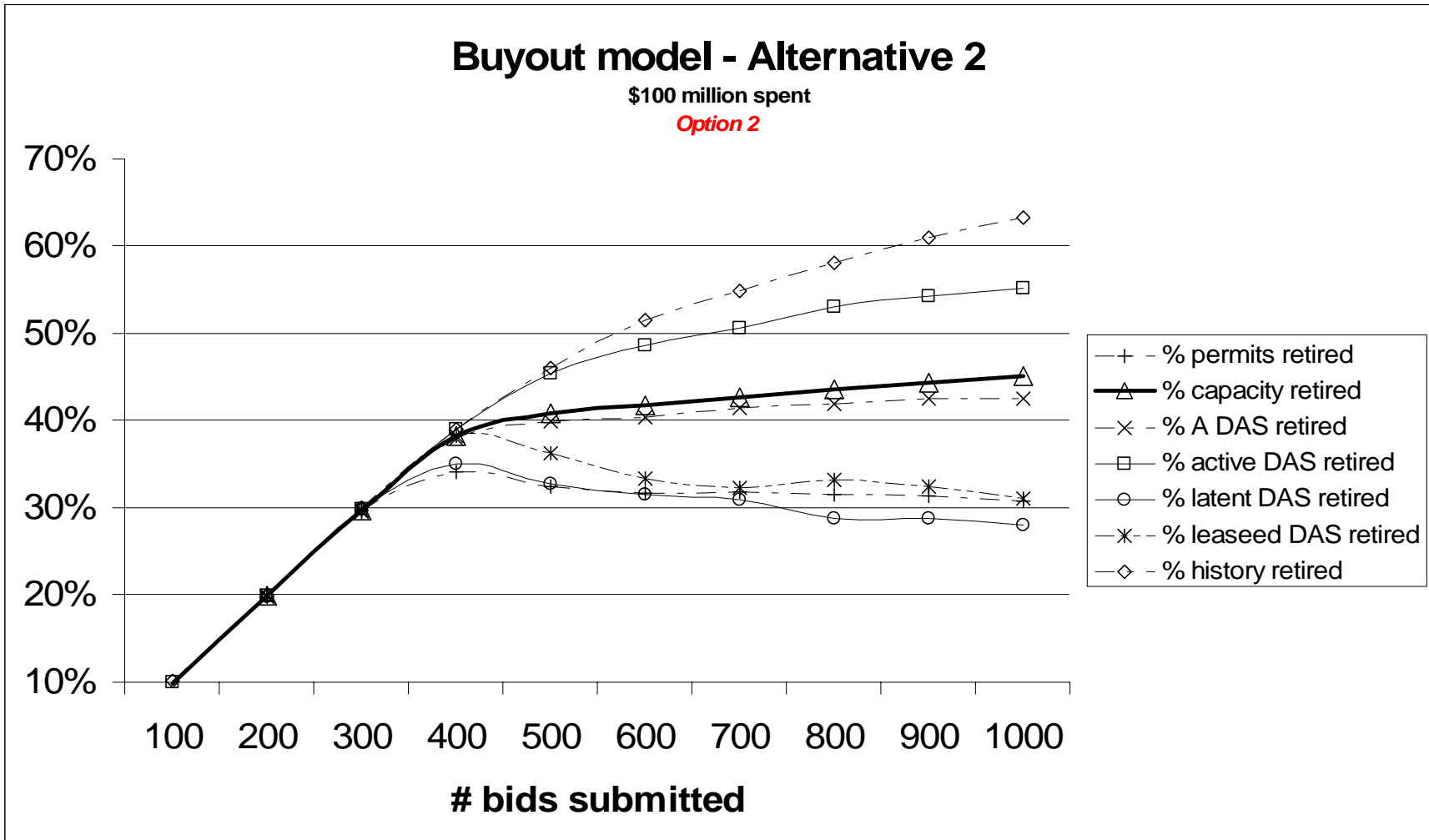


Figure 4 – Option 2(a) simulation results

