

3 GHz Spectrum Auctions

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Presentation Outline

- On prices
- On set-asides
- On service areas, products, and licences
- Overview of 3500 MHz auction prices
- Bidding Patterns in the 3500 MHz auction
- What we can expect in the 3800 MHz auction

A Note On Prices

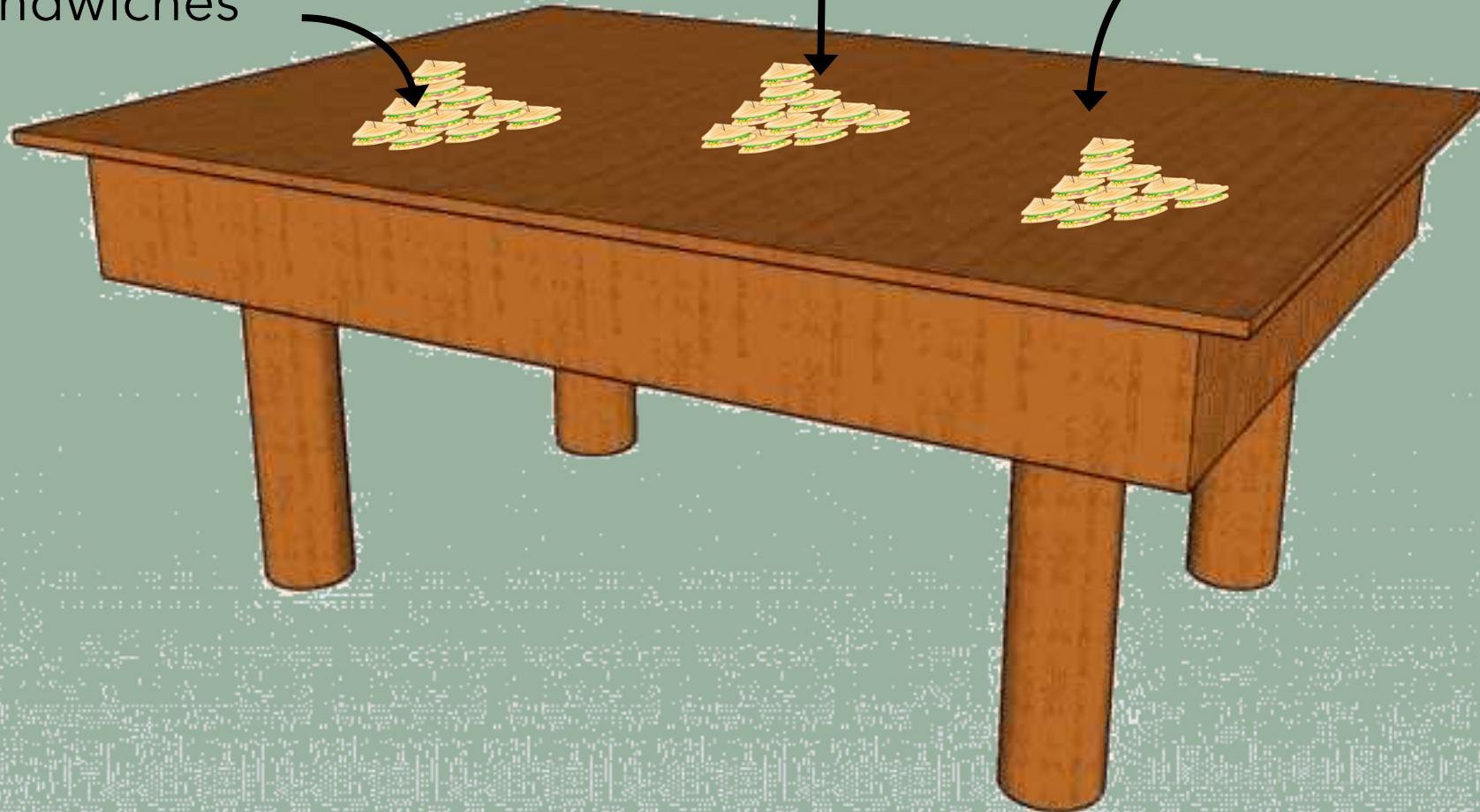
Service Area	Toronto, ON	Brandon, MB
Licence Price (3500 MHz)	\$194,242,000	\$2,830,300
Spectrum Block Size	10 MHz	10 MHz
Population	7,023,497	103,743
Price per MHz per pop	$\$194\text{M} \div 10 \text{ MHz} \div 7\text{M}$ = \$2.77/MHz/pop	$\$2.8\text{M} \div 10 \text{ MHz} \div 104\text{k}$ = \$2.73/MHz/pop

A Note On Set-Asides

50 Roast Beef Sandwiches

50 Ham & Cheese Sandwiches

50 Egg Salad Sandwiches



Set-Asides

Set-Aside Products -only people under 30 can bid

'Open' Products
-only people over 30 can bid
-anyone can win

30 Ham & Cheese
Sandwiches

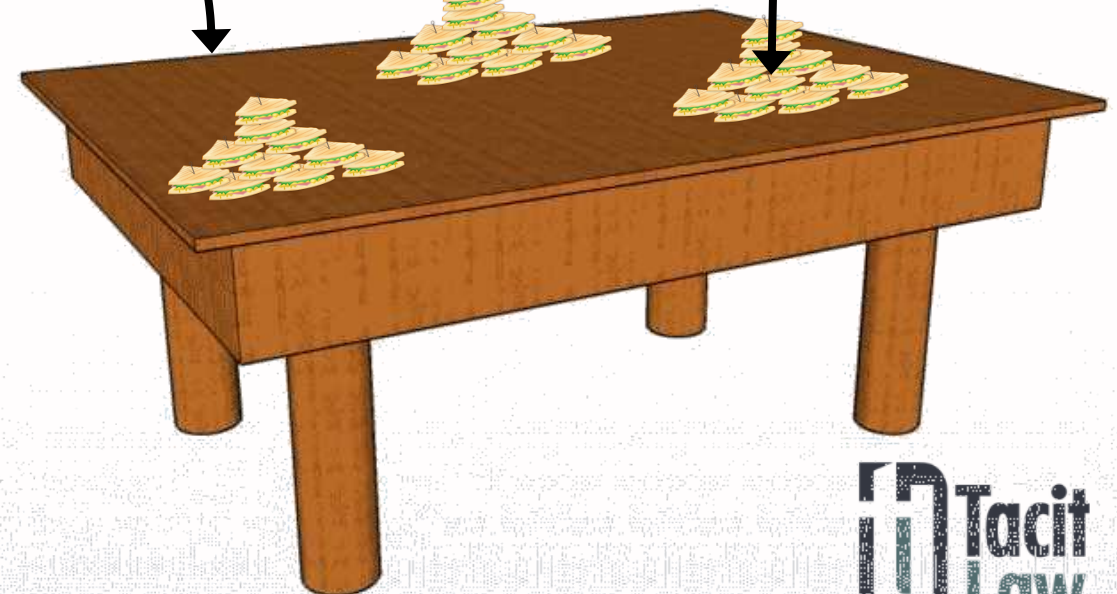
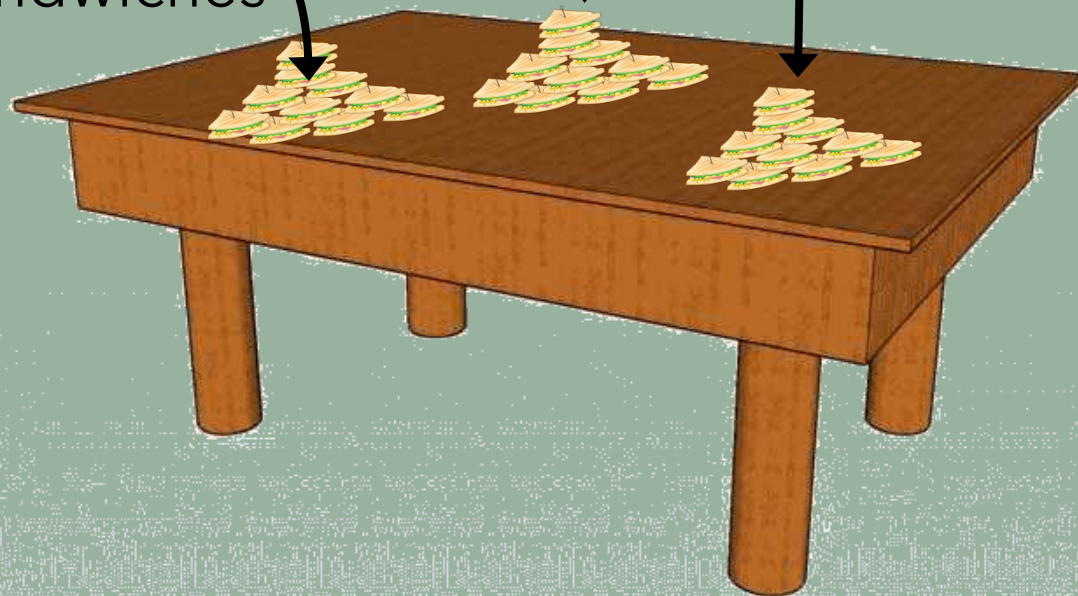
30 Egg Salad
Sandwiches

30 Roast Beef
Sandwiches

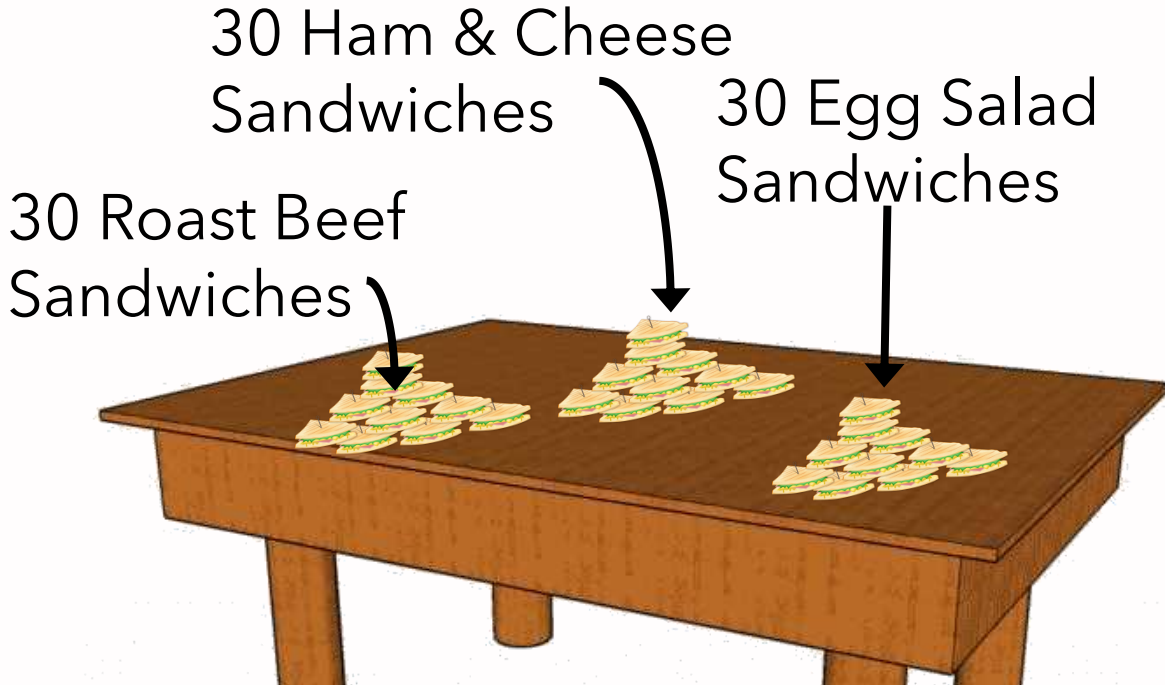
20 Roast Beef
Sandwiches

20 Ham & Cheese
Sandwiches

20 Egg Salad
Sandwiches



'Open' Products



Set-Aside Products



6 Turkey Sandwiches

"Open to all" Products

This block features a small brown wooden table with six turkey sandwiches on it. The text '6 Turkey Sandwiches' is positioned above the table, and the phrase '"Open to all" Products' is written in large, bold white letters below the table.

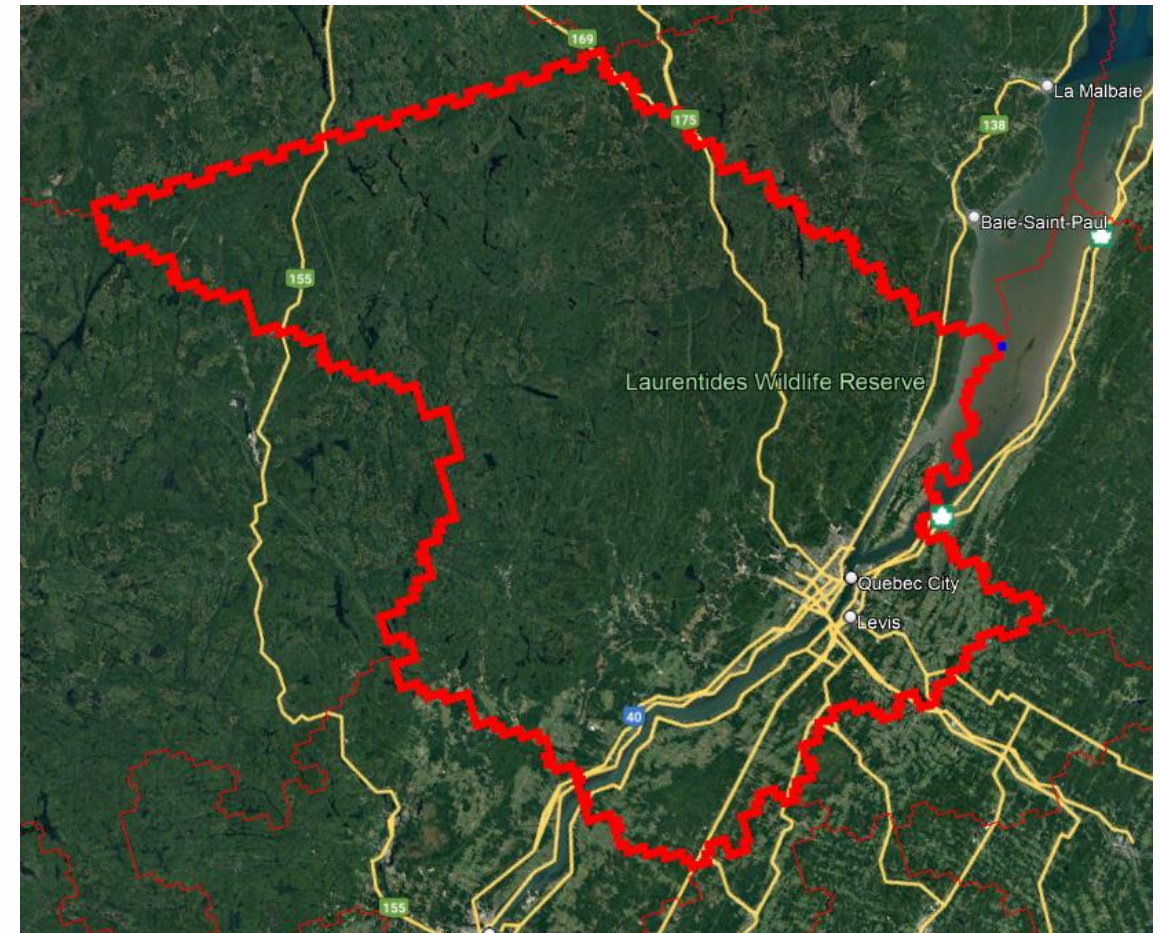
On Service Areas, Products, and Licences

3500 MHz auction:

- 172 Tier 4 service areas
- 353 Products (3500 MHz)
- 3,440 Licences (3500 MHz)

Example: 4-030 Quebec

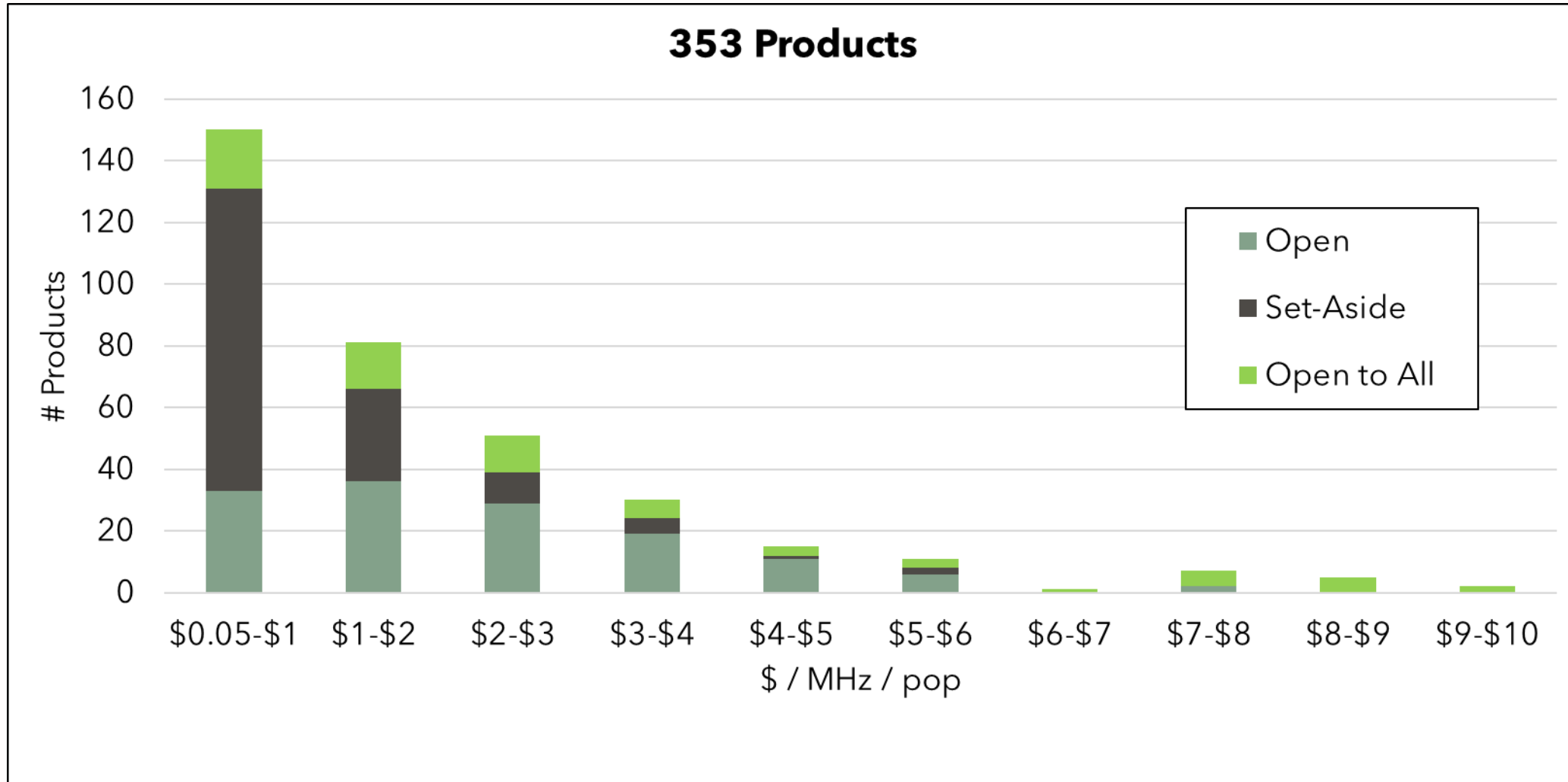
3 Products	14 Licences
4-030-0 Open	7 Licences
4-030-0 Set-Aside	5 Licences
4-030-1 (Open to all)	2 Licences



Product Prices - 3500 MHz auction



Unit Prices - 3500 MHz auction

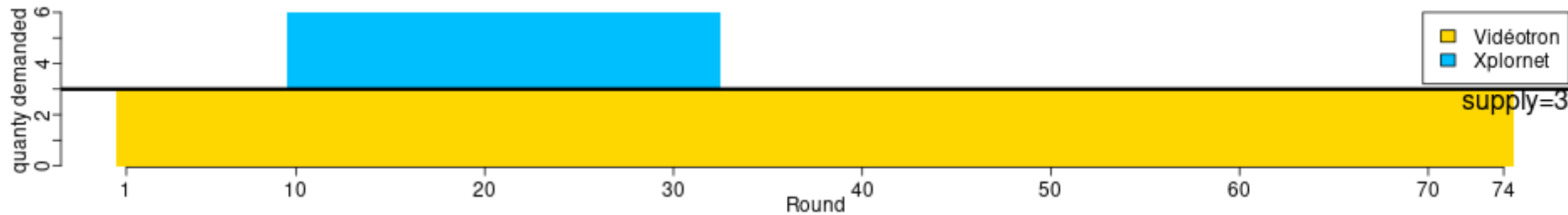


Ten Most Expensive Products

Product Number	Category	Service Area Name	Prov	\$/MHz/pop
4-040-0	"o2a"	Victoriaville	QC	\$ 9.91
4-038-0	"o2a"	Louiseville	QC	\$ 9.54
4-041-0	"o2a"	Coaticook	QC	\$ 8.98
4-054-1	"o2a"	Mont-Laurier/Maniwaki	QC	\$ 8.58
4-047-0	"o2a"	Granby	QC	\$ 8.58
4-039-0	"o2a"	Asbestos	QC	\$ 8.42
4-091-0	"o2a"	Wallaceburg	ON	\$ 8.30
4-032-0	"o2a"	Saint-Georges	QC	\$ 7.86
4-093-0	"o2a"	Strathroy	ON	\$ 7.85
4-079-0	Open	Guelph/Kitchener	ON	\$ 7.69

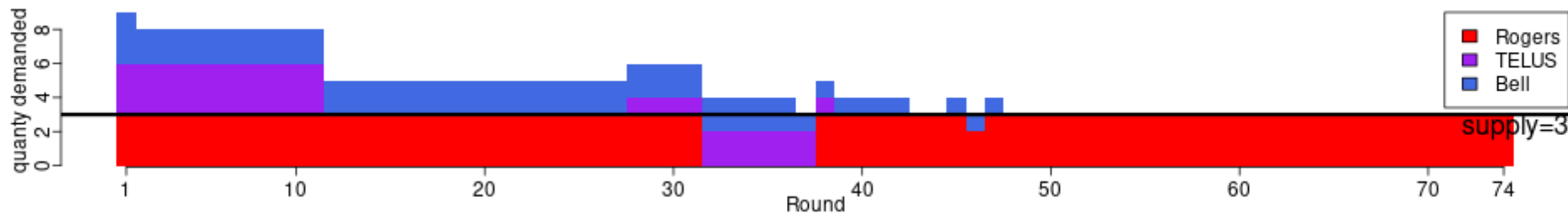
Bidding Patterns in the 3500 MHz auction

4-055-0 Ottawa/Outaouais Set-Aside Bidding



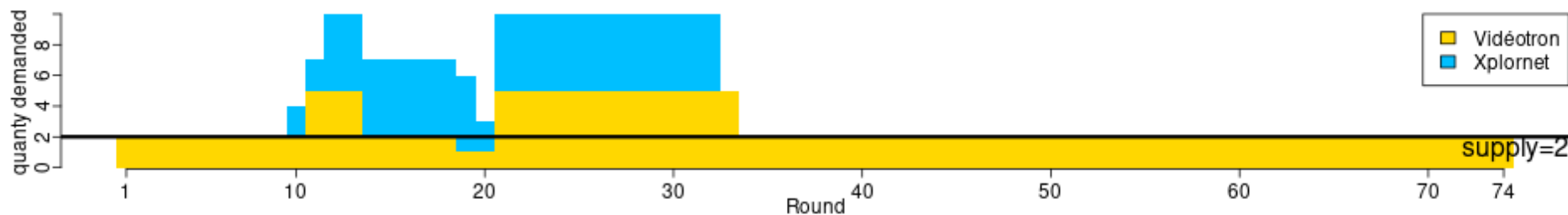
4-055-0 Set-Aside
\$0.90/MHz/pop
\$13 Million

4-055-1 Ottawa/Outaouais Open Bidding



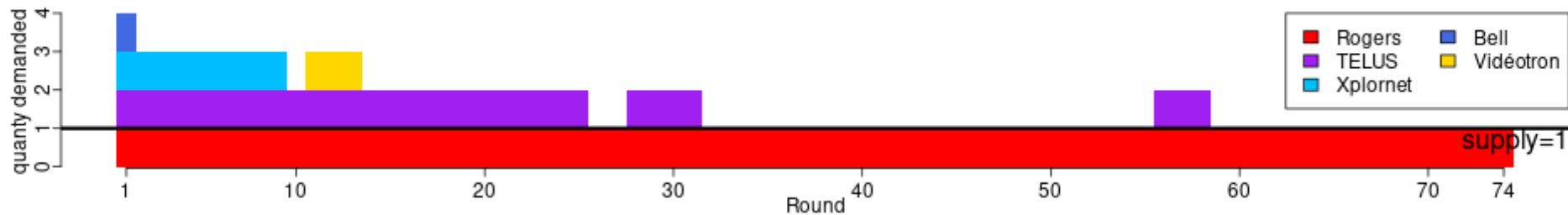
4-055-1 Open
\$5.50/MHz/pop
\$79 Million

4-055-1 Ottawa/Outaouais Set-Aside Bidding



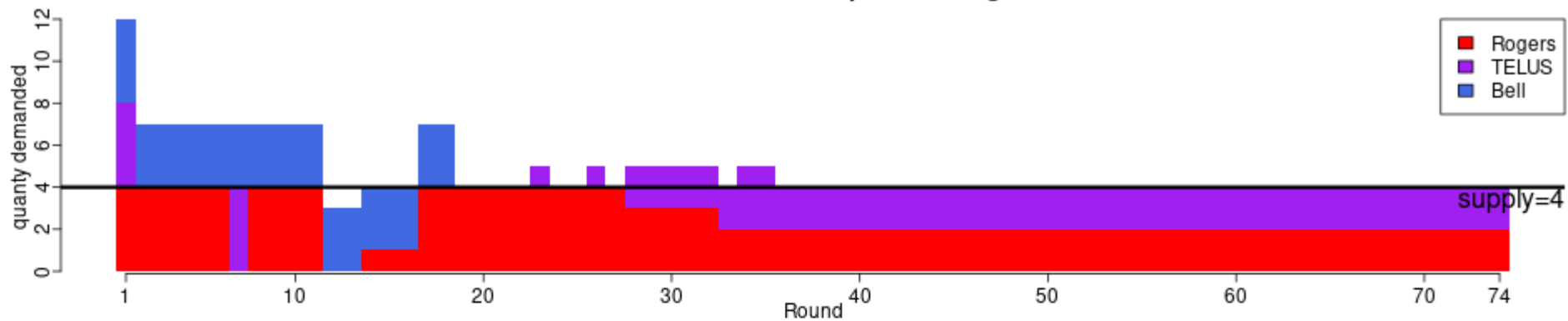
4-055-1 Set-Aside
\$0.99/MHz/pop
\$14 Million

4-055-2 Ottawa/Outaouais Bidding



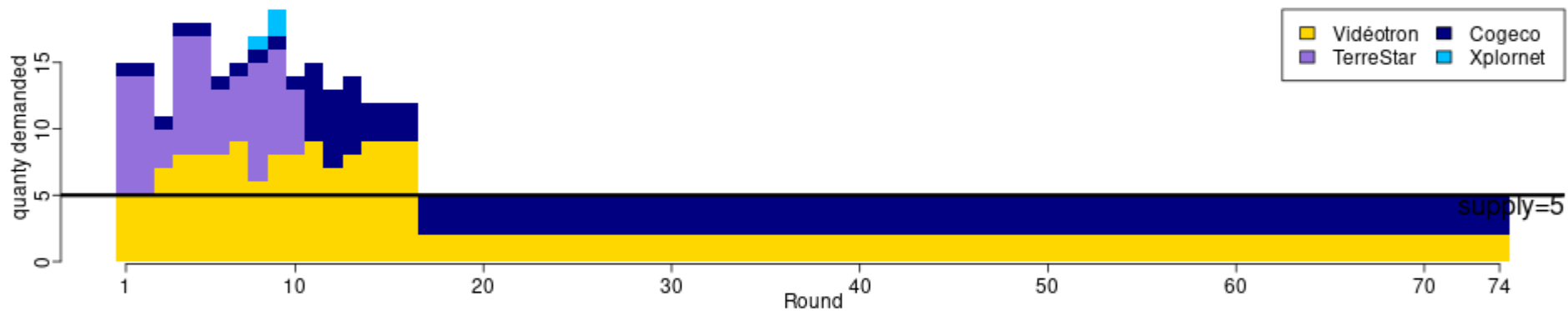
4-055-2 Open to all
\$2.12/MHz/pop
\$24 Million

4-077-0 Toronto Open Bidding



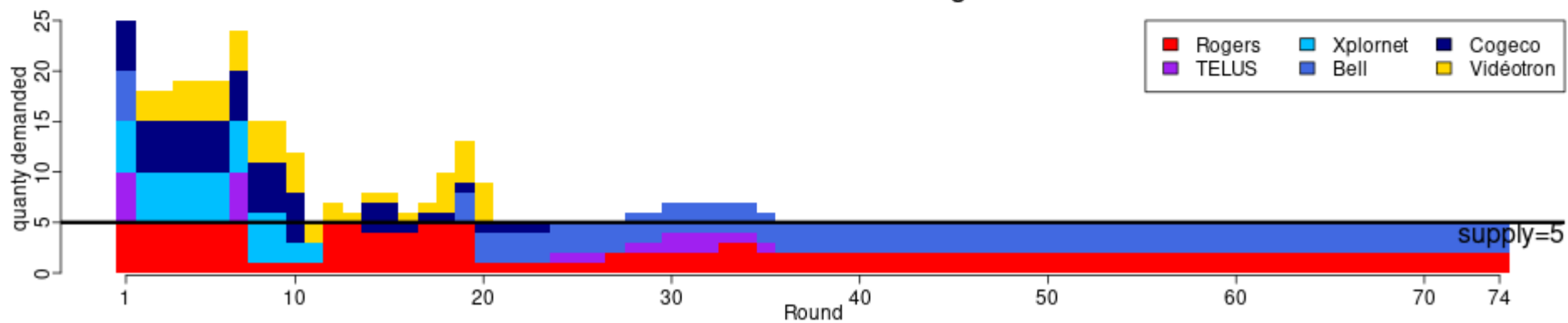
4-077-0 Open
\$2.77/MHz/pop
\$194 Million

4-077-0 Toronto Set-Aside Bidding



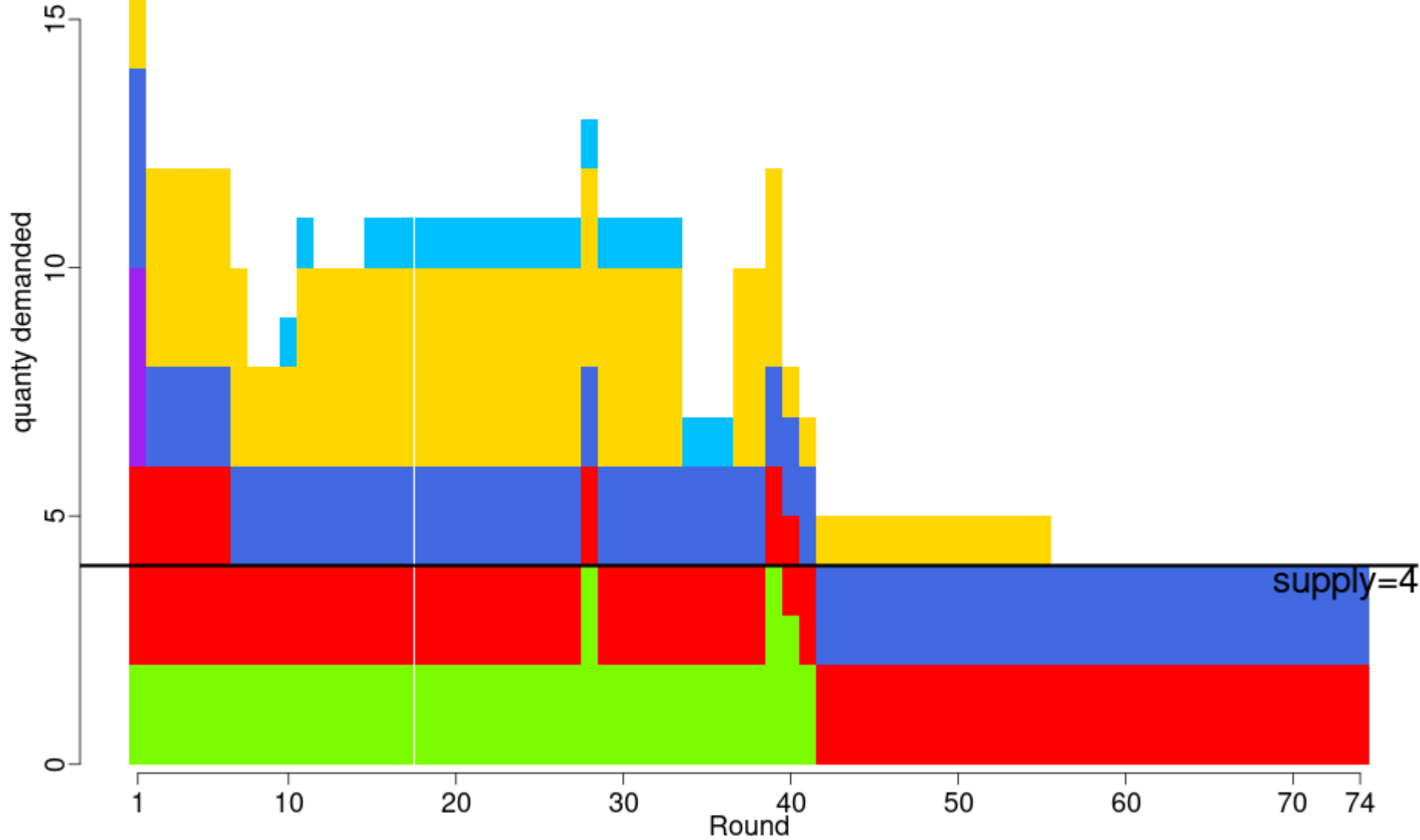
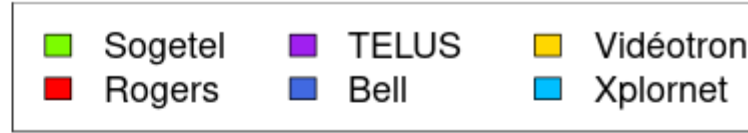
4-077-0 Set-Aside
\$0.97/MHz/pop
\$68 Million

4-077-1 Toronto Bidding



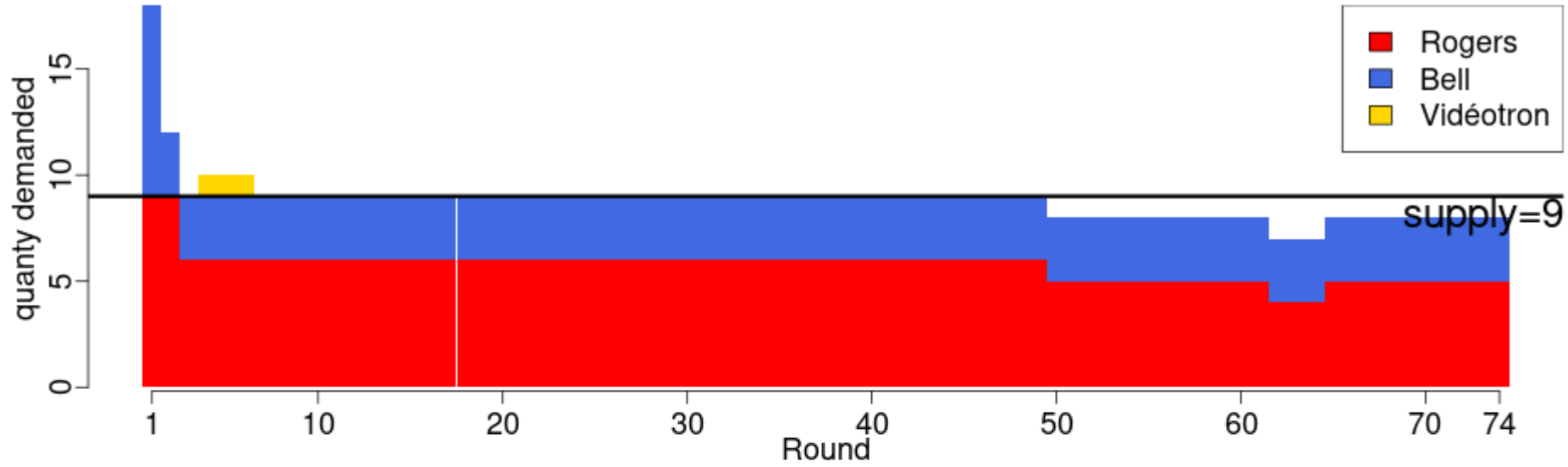
4-077-0 Open to all
\$2.77/MHz/pop
\$194 Million

4-040-0 Victoriaville Bidding



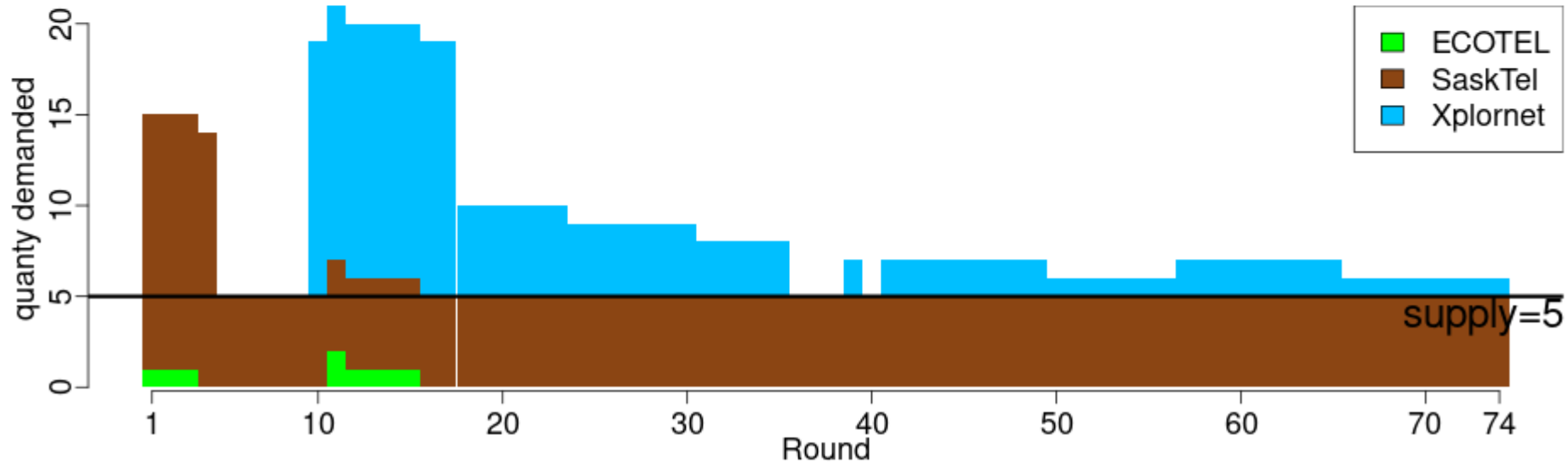
4-040-0 Open to all
 \$9.91/MHz/pop
 \$5.6 Million

4-130-0 Northern Saskatchewan Open Bidding



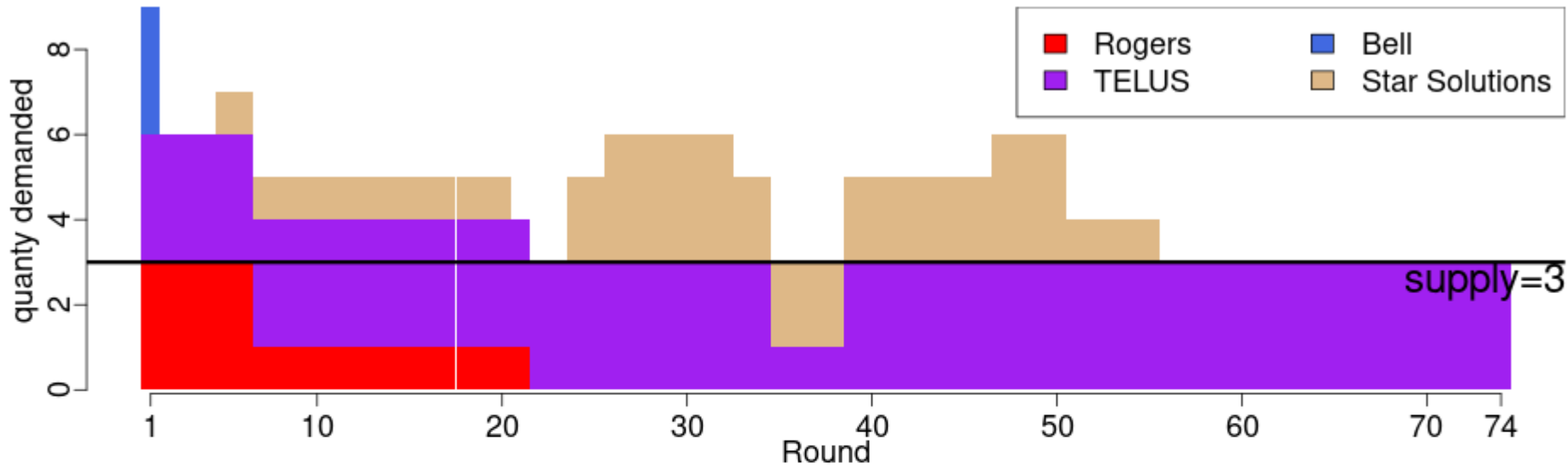
4-130-0 Open
\$5.08/MHz/pop
\$1.9 Million

4-130-0 Northern Saskatchewan Set-Aside Bidding



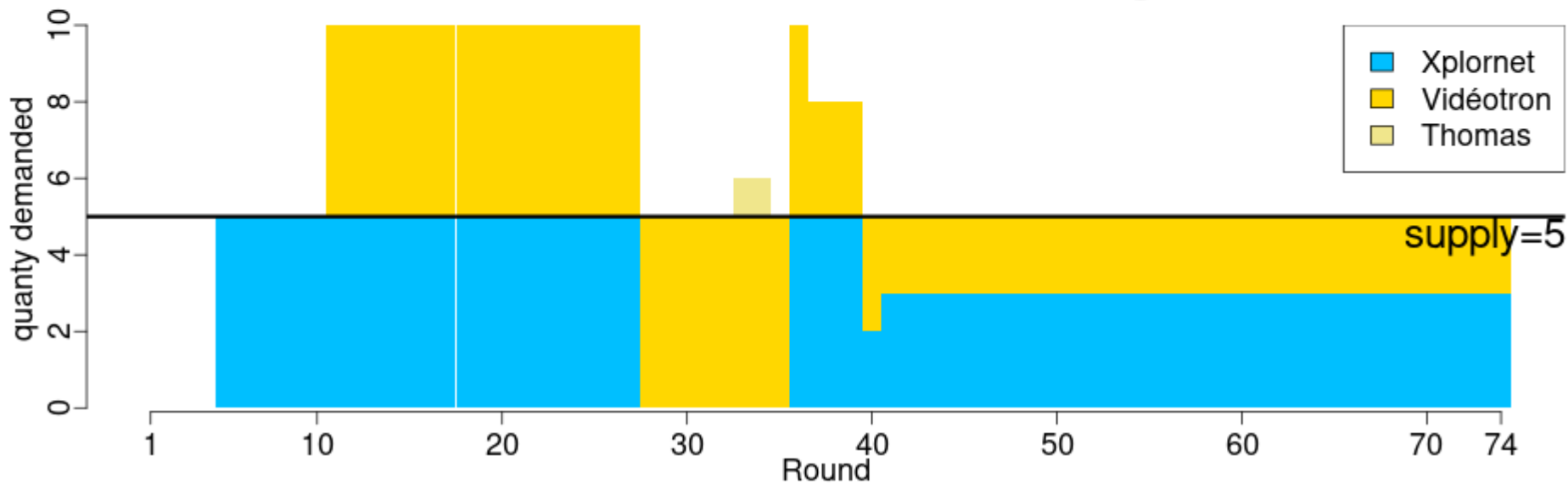
4-130-0 Set-Aside
\$5.08/MHz/pop
\$1.9 Million

4-163-0 Golden Open Bidding



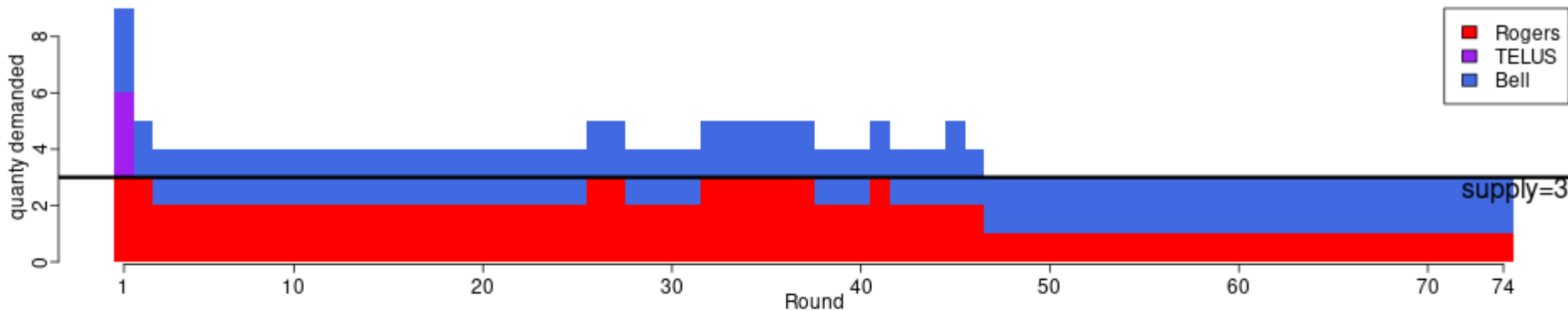
4-163-0 Open
\$7.16/MHz/pop
\$491,000

4-163-0 Golden Set-Aside Bidding



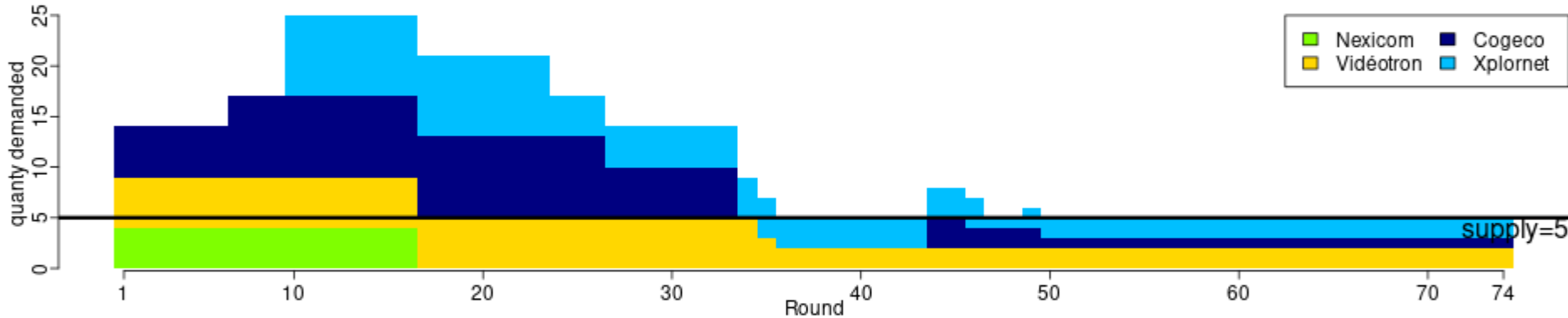
4-163-0 Set-Aside
\$0.67/MHz/pop
\$46,000

4-070-0 Kingston Open Bidding



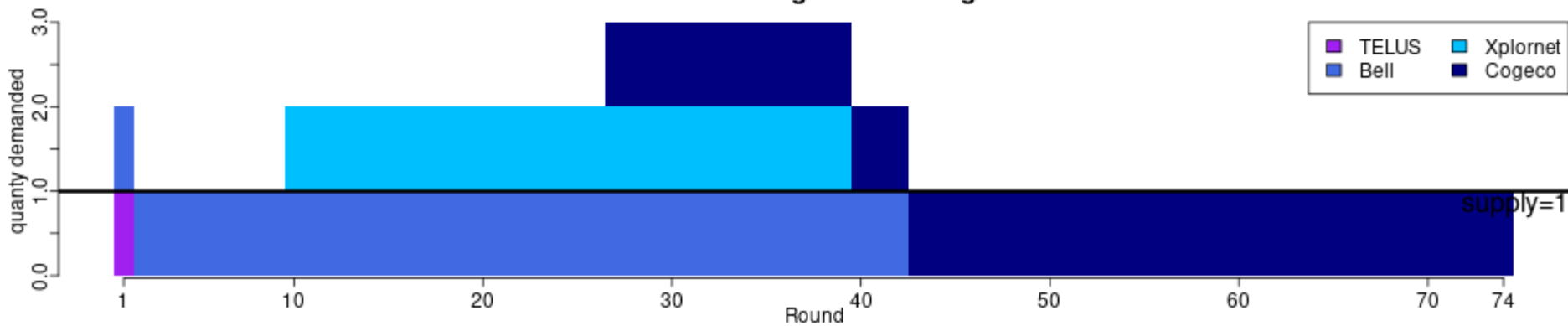
4-070-0 Open
\$4.88/MHz/pop
\$8.7 Million

4-070-0 Kingston Set-Aside Bidding



4-070-0 Set-Aside
\$3.10/MHz/pop
\$5.5 Million

4-070-1 Kingston Bidding



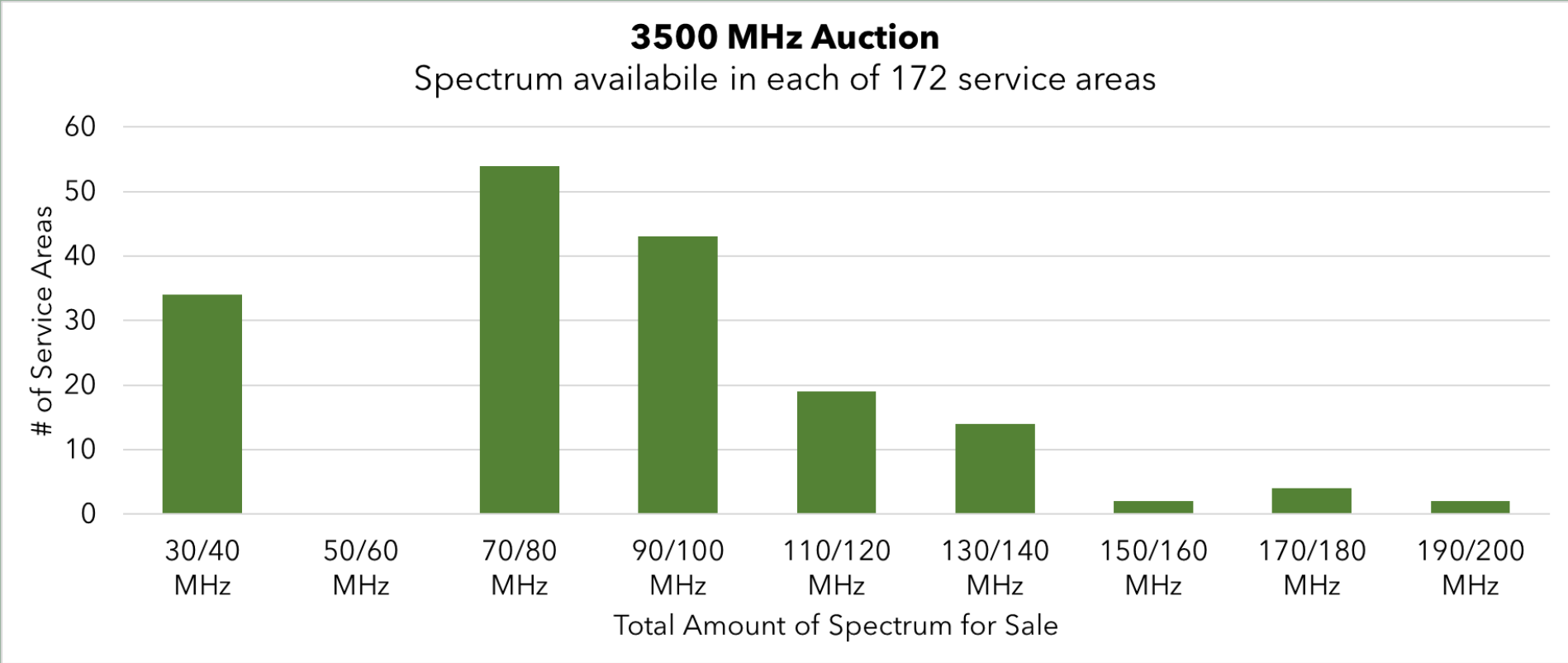
4-070-1 Open to all
\$1.59/MHz/pop
\$2.1 Million

Next Auction

2023?



Amount of Spectrum



Spectrum Cap

(assuming 100 MHz cross-band cap)

4-055 Ottawa		
Company	Current 3500 MHz Holding	Can Buy in 3800 MHz:
Bell	30 MHz	70 MHz
Rogers	70 MHz	30 MHz
Telus	50 MHz	50 MHz
Vidéotron	50 MHz	50 MHz
Total that Bell, Rogers, Telus, and Vidéotron can buy		200 MHz
Total left for everybody else		50 MHz

4-040 Victoriaville		
Company	Current 3500 MHz Holding	Can Buy in 3800 MHz:
Bell	50 MHz	50 MHz
Rogers	40 MHz	60 MHz
Cogeco	50 MHz	50 MHz
Xplornet	60 MHz	40 MHz
Total that Bell, Rogers, Cogeco, and Xplornet can buy		200 MHz
Total left for everybody else		50 MHz

Economic Factors

- Winning bidder valuations
- Auction budgets
- Bidding objectives

Thank You

Stay Tuned for
Auction Rules

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