# Response to Undertakings Issued to UNIFOR

## Notice of Consultation CRTC 2015-421

**Dustin Chodorowicz, Nordicity**

**Peter Lyman, Nordicity**

**Peter Miller, P. Eng., L.L.B**

Prepared for

**UNIFOR**

**February 8, 2016**

# Preamble

*We note at the outset, that the outlooks presented in this study are not intended to be firm predictions of the future. As in all reasonable outlooks, the study's value is not in predicting with absolute certainty what will happen, but in providing scenarios of what likely could happen depending on whether current technological trends and the CRTC's Let's Talk TV Policy Decisions stand.*

*As stated in the study, the authors welcome this kind of dialogue about our assumptions and conclusions, and indeed hope this study triggers a debate among decision makers and stakeholders about the future of Canadian TV from an economic and Canadian programming perspective*

*In most cases the assumptions around the forecasts were grounded in other data, proxies, and studies. In a few cases, the assumptions were based on reasonable figures that flow from the trends and other known factors. Where asked whether we took into account impacts on the expense line as well as the revenue lines, we have made the point that indeed one of the crucial expense items is programming, and that it was certainly taken into account.*

# Canadian Television 2020: Technological and Regulatory Impacts

***a. Please detail the calculations resulting in the baseline scenario on pages 4 to 8 and pages 22 to 33 of the study and how underlying assumptions affect the projections.***

Answer:

The calculations and assumptions are detailed in paragraphs 112 to 266 of the study.

The baseline scenario is in fact summarized on pages 4-5. The exec sum pages 22-25 describe the main calculations in the baseline scenario, and the complete logic flow and steps are described in detail on pages 44-72 in section 2.1. (The impact of LTTV decisions is summarized on pages 5-8 and further described on pages 26-33 (labelled section 2.4). The full details are on pages 73-93).

With respect to the baseline forecast, the following summarizes the key underlying assumptions and how they affect the projections:

- Contributing data were listed on page 45, that relates to online consumption of Canadians, TV viewing, decline of % of Canadians who pay for TV services, "cord cutting" data of fact and intentions, and Netflix subscription growth;
- The primary sources were Comscore 2014 and MTM Surveys Fall of 2014 and Spring, 2015
- While we cannot predict OTT take-up with certainty, we pointed to the price-value relationship for OTT services as quite attractive. We also recognized that millennials, as a

market segment, were more prone to cut subscriptions to BDUs than older demographics.

- Following a review of BBM data, we pointed out that older demographics were expected to remain loyal to BDUs longer, so that BDU subscriptions would not fall below 60%, even in the worst case scenario.
- We then did a bottom-up forecast of OTT subs, particularly from 3 categories – cord nevers, cord cutters, and cord-shavers/keepers. We validated the forecasts against forecasts for OTT take-up in the US.
- The analysis of "cord nevers" is quite detailed, and we cited other reports showing which demographics were cord nevers. We then estimated that a certain % of those households would be cord nevers, particularly a high percentage of new family formations. We went into the same depth of analysis about cord cutters and cord shavers/keepers.
- To validate the OTT forecast for Canada, we compared the forecasts of penetration rates for the US, including a recognition of the fact that Quebec take-up lags English Canada.
- To estimate BDU revenues (ARPU) we analyzed prior rate increases of BDUs. Until 2012 rate increases were more than double inflation, but since the introduction of Netflix, they were about the rate of inflation. In our estimates to 2012, we assumed that OTT would keep prices in line to the same extent. However, the most price sensitive subscribers would either "cut the cord" or adopt unbundled options. That would mean that the rest of the subscribers would be somewhat less price sensitive. Therefore, we factored in an ARPU premium of 1%, in effect inflation plus 1%.
- After accounting for cord cutting, we looked at cord shaving, and assumed that cord shavers would reduce their BDU bill/service by 25%. The result of cord shaving shows that the ARPU premium is reduced somewhat, so that BDUs' ARPU is still growing, but at a lesser pace.
- When the forecasts of BDU subs and ARPU are combined, we arrive at an estimate of total BDU revenue to 2020 – a gradual increase.
- As for advertising revenues, we undertook a two stage approach. The first stage was an estimate of the total advertising spend in Canada to 2020. We relied primarily on Statistics Canada, TVB, Zenith Optimedia in a 2015 study and Scotiabank's forecast of nominal GDP.
- The second stage was to allocate growth across all media, including TV advertising. We used E-Marketer and IAB as well as TVB and Zenith Opimedia forecasts to make the allocations across media.
- For revenue to programming services, we built on the TV advertising forecasts, as well as assumptions about average carriage fees. (Other revenue components were assumed to be fixed to 2014 proportions.)
- In terms of TV advertising forecasts, we estimated the proportionate share of conventional (including CBC) vs. specialty-TV services, based on industry trends over the last several years.
- In terms of carriage fees for specialty-TV services, we assumed under the baseline case that they would follow the forecasted BDU ARPU. As for pay/PPV/VOD, we observed that since the arrival of Netflix, their ARPU declined by 10%. So, we assumed that its revenue would continue to

decline by some 5 cents per year on average – generating a total decline of 40% by 2020 vs. what it was in 2014.

- These calculations resulted in total revenues for each category of programming service over the next 5 years.
- With respect to Canadian programming expenditures, we translated the impact of the soft growth of BDU revenues on their annual 5% of revenues contribution to Canadian programming. Then we calculated the effect of lower revenues on the CPE and PNI for each class of broadcaster. The result was the overall impact on Canadian programming as a result of the baseline scenario, which was the result of technology – basically the advent of OTT competition.

***b. in the study on pages 75 to 77 the projections for BDU ARPU and in turn for BDU revenue projections are based on three major assumptions. Please answer the following questions concerning these assumptions:***

***i. Why is it assumed that 15% of subscribers would choose the skinny package and discretionary services?***

Answer:

For the estimate of skinny basic subscribers, we looked at the forecasts of others, namely: Oliver Wyman, Corus, and Rogers. We chose the lower end of these forecasts, and built it up gradually over the years to 2020 – figuring that it would take subscribers some time to switch to the skinny basic.

***ii. Why is it assumed that the 15% of subscribers would spend an average of $20 for discretionary services?***

Answer:

We assumed that for most skinny basic subscribers, subscribers would still buy additional pay/specialty-TV services, though at a much reduced rate. To arrive at this $20 figure, we looked at "pick and pay" proxies for BDUs already offering a version of the skinny basic – namely Videotron and Telus.

It should be noted that ARPU for subscribers to BDUs in 2014 was $64.41, projected to rise to $ 72.90 in 2020 (see Figure 19). An average of $20/month means that they are about $20-25/mo. lower than the subscriber average (depending on which year this amount is compared against).

***iii. Why is it assumed that these subscribers pay the same average amount as other subscribers? Given that subscribers that are more likely to switch to the skinny basic package are those that prefer to pay less for their television services, would it not be more likely that these subscribers already pay less than average?***

Answer:

We agree that it is "more likely that these subscribers already pay less than average." It is the premise behind the question that is false. We do not assume these subscribers would pay the same amount as

other subscribers. As explained above, the assumption is that the subscribers would pay some $20-25 less per month.

***c. As a result of the assumptions mentioned previously the study projects that the subscribers who switch to skinny basic would on average reduce their monthly spending from $65 to $45. However, research mentioned in the study which was conducted by the Oliver Wyman Group as commissioned by Rogers Communications Inc and Shaw Communications Inc. suggests that subscribers who would switch to the skinny basic package would reduce their average monthly spend by $8.56. Please explain why this study, Canadian Television 2020, projects significantly larger reduction in average spending?***

Answer:

As per the answer to question "b" above, we looked at the evidence of proxies to derive our estimates. As the question "b" implies, subscribers going to the skinny basic would expect to see real reductions. Of course, this "average spending" reduction by subscribers only applies to those who go to skinny basic, not the average across the board.

***d. In the study, Near Term Prospects for Local TV in Canada, it is stated that as the result of station closures advertising revenue would be diverted to other conventional television stations and other advertising media. Similarly, in this case, the revenue lost by BDU and pay and specialty services would either be in the hands of advertisers or subscribers, and will thus be spent elsewhere in the economy. How does this factor in the projected impact to GDP and employment?***

Answer:

In theory this outcome may arise. However, the reality is that a significant share of ad spend is likely to migrate to foreign-owned web and social media platforms with limited workforces in Canada. Similarly, much of the subscriber fee revenue diverted away from Canadian specialty and pay services is going to Netflix which also has almost no workforce in Canada.

Some of it does remain in Canada. However, those revenues of Shomi and Crave are outside the regulatory system, so there is no flow back into the broadcasting system.

***e. It is assumed in this study that pay and specialty services as well as BDUs will not adjust to changes in the industry.***

It is the whole point of the study that there will be adjustment by BDUs and programming services.

- The BDUs will face competition from OTT, but are expected to maintain their price premium, though at a reduced rate. They will exact similar or greater margins in negotiations with Canadian pay/specialties because there will be greater bargaining leverage in their hands as a result of some of the changes in carriage regulations as detailed in the study.
- Pay and specialty-TV services will react to reductions in revenues by spending less on Canadian content, which of course means less for Canadian producers.

***i. Please explain why adjustments from these entities to their services, prices and expenses to maximize profitability and minimize the impact of the LTTV decision were not considered?***

Answer:

We did not speculate what broadcasting groups would do to face the challenges of competition and new rules in terms of business decisions – aside from cutting their expenses. Some might get more aggressive in keeping programming rights and find new revenues in foreign markets (likely at the expense of production companies, now that terms of trade will end). Some independent specialty services might sell out to the vertically integrated companies, thus reducing the number of voices in Canadian broadcasting. Similarly, some might exit the business altogether.

The point is that in the course of these adjustments, we have forecast the ultimate impact on Canadian programming expenditures. The baseline scenario also projects a squeeze on Canadian programming production, commissioning, and acquisition. However, the LTTV effect has potentially a much greater impact, whatever the individual business decisions by Canadian broadcasters.

***ii. Please elaborate on how such adjustments would affect the results of this study.***

Answer:

It would require considerable extra analysis and interaction with broadcasters (and BDUs) to develop such detailed forecasts. Since that was not in our remit, it was not done. Nor do we think it would add greatly to an understanding of the impact of the LTTV Decisions.

One relevant scenario for the Commission to examine would be to model the potential impact arising from the loss of terms of trade. As stated in this report, we did not do that because it would require a substantial analysis. Would it put Canadian producers back into becoming line producers for broadcasters, working on a fee basis only? Would it push Canadian producers to consolidate around a few major, international media companies (like DHX or eOne)? If the latter, would they eventually gravitate to Los Angeles, and cease to be very concerned about Canadian production? As these questions show, there are many outcomes that would remain to be analyzed.

***f. The study, on page 12, considers indirect and induced impacts in the total economic impact of the LTTV policies but does not include detailed explanations as to how they were calculated. Please explain:***

***i. How these impacts were calculated?***

Answer:

The estimates of indirect and induced impacts were based on the ratios found in Table 1, which express employment (FTEs) and GDP per $1 million of revenue (or production volume).

The ratios for the film and TV production segment were derived on the basis of data reported in *Profile 2014: An Economic Report on the Screen-based Production Industry in Canada*, published by the Canadian Media Producers Association (CMPA).[1] A description of the derivation of those ratios can be found in the Notes on Methodology section of that report. These and similar ratios have been

[1] CMPA, Association québécoise de la production médiatique (AQPM) and the Department of Canadian Heritage (2015), Profile 2014: An Economic Report on the Screen-based Production Industry in Canada, http://cmpa.ca/sites/default/files/documents/industry-information/profile/CMPA_2014_eng.pdf.

consistently used by Nordicity in creative industries studies for public and private sector clients over the last several years.

The ratios for the other segments of the broadcasting industry were developed based on the data and methodology used in *The Economic Contribution of the Film and Television Sector in Canada*, published by the Motion Picture Association - Canada (MPA-C).[2] A description of that methodology can be found in Appendices A and B of that report. Since that report was based on data for the 2011 broadcast year, the economic ratios were updated to reflect more recent broadcasting industry statistics published by the CRTC for the 2014 broadcasting year. The modelling approach used to prepare that report also employed Nordicity's MyEIA Model. A more detailed description of the MyEIA Model can be found in the response to f. ii (below).

**Table 1 Economic impact ratios**

| Per $1M revenue (or production-volume) | Indirect | | Induced | | Spin-off (indirect + induced) | |
|---|---|---|---|---|---|---|
| | FTEs | GDP ($M) | FTEs | GDP ($M) | FTEs | GDP ($M) |
| Film and TV production (including in-house production) | -- | -- | -- | -- | 12.97 | 0.75 |
| Broadcasting distribution undertakings (BDUs) | 0.61 | 0.05 | 1.61 | 0.16 | 2.22 | 0.21 |
| TV broadcasting (excluding in-house production) | 1.41 | 0.12 | 0.67 | 0.06 | 2.07 | 0.18 |
| Video-on-Demand (VOD) /Pay-per-View (PPV) | 2.22 | 0.17 | 0.61 | 0.05 | 2.83 | 0.22 |

Source: Authors' calculations based on data from CMPA et al. (2015), MPA-C et al. (2013) and CRTC.

The following table summarizes the application of the spin-off impact ratios to the incremental changes in revenue in LTTV scenario.

**Table 2 Application of economic ratios to forecast impacts of Let's Talk TV Policy on broadcasting industry revenue and production volume**

| | 2016F | 2017F | 2018F | 2019F | 2020F |
|---|---|---|---|---|---|
| **Broadcasting distribution undertaking** | | | | | |
| **Δ revenue ($M)** | **(200.9)** | **(478.5)** | **(747.2)** | **(801.9)** | **(858.1)** |
| **Δ employment** | | | | | |
| Ratio | 2.22 | 2.22 | 2.22 | 2.22 | 2.22 |
| Impact (FTEs) | (450) | (1,060) | (1,660) | (1,780) | (1,900) |
| **Δ GDP** | | | | | |
| Ratio | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| Impact ($M) | (41.6) | (99.1) | (154.8) | (166.2) | (177.8) |
| **Private conventional TV** | | | | | |
| **Δ revenue ($M)** | **0.0** | **(20.0)** | **(20.4)** | **(20.8)** | **(21.2)** |

[2] MPA-C, CMPA (2013), The Economic Contribution of the Film and Television Sector in Canada, http://www.nordicity.com/media/2013724dgfjbufnd.pdf.

| | 2016F | 2017F | 2018F | 2019F | 2020F |
|---|---|---|---|---|---|
| **Δ employment** | | | | | |
| Ratio | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| Impact (FTEs) | (40) | (40) | (40) | (40) | (40) |
| **Δ GDP** | | | | | |
| Ratio | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| Impact ($M) | (3.6) | (3.7) | (3.8) | (3.8) | (3.6) |
| **Specialty/Pay TV** | | | | | |
| **Δ revenue ($M)** | (200.7) | (489.9) | (808.3) | (888.1) | (970.4) |
| **Δ employment** | | | | | |
| Ratio | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| Impact (FTEs) | (420) | (1,010) | (1,670) | (1,840) | (2,010) |
| **Δ GDP** | | | | | |
| Ratio | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| Impact ($M) | (36.2) | (88.3) | (145.7) | (160.1) | (174.9) |
| **Canadian film and TV production** | | | | | |
| **Δ production volume ($M)** | **(68.0)** | **(172.0)** | **(280.0)** | **(307.0)** | **(335.0)** |
| **Δ employment** | | | | | |
| Ratio | 12.97 | 12.97 | 12.97 | 12.97 | 12.97 |
| Impact (FTEs) | (880) | (2,230) | (3,630) | (3,980) | (4,350) |
| **Δ GDP** | | | | | |
| Ratio | 0.75 | 0.75 | 0.75 | 0.75 | 0.75 |
| Impact ($M) | (51.2) | (129.4) | (210.7) | (231.0) | (252.1) |

Source: Authors' calculations based on data from CMPA et al. (2015), MPA-C et al. (2013) and CRTC.

***ii. If the calculations are based on a model, please explain the model and its underlying assumptions.***

Answer:

As noted above (in the response to f. i) the estimates of indirect and induced (i.e. the spin-off) impacts for certain broadcasting industry segments were generated by Nordicity's MyEIA economic impact model. This model utilizes Statistics Canada's input-output (I-O) tables and other economic data (e.g. average wages) to derive estimates of indirect and induced impacts in terms of wages, GDP and employment.

*Indirect impact:*

The MyEIA Model utilizes the following steps and assumptions to estimate indirect impacts.

1. Non-labour expenditures are multiplied by the provincial supply ratios to estimate provincial supply.
2. The estimates of provincial supply are mapped to the 35 industries in Statistics Canada I-O tables to yield a 35x1 shock vector, $g^E$.

3. The I-O tables published by Statistics Canada are used to construct the following 35x35 indirect impact matrix.

$$[I - D'(I - \hat{u})\ B]^{-1} \cdot$$

Where:

$I$ is a 35x35 identity matrix

$D'$ is the transpose of matrix D, which is a 66x35 matrix of each industry's (*j*) share of the production of commodity *i*. Derived from the output tables.

$\hat{u}$ is a 66x66 diagonalized matrix of each commodity (*i*) import intensity. Derived from the final demand table.

$B$ is a 66x35 matrix of each input's share of each industry's (*j*) intermediate inputs (*i*). The value-added components of the input table are excluded.

4. This indirect impact matrix is multiplied by the shock vector, $g^E$, to arrive at estimates of indirect output in each of the 35 industries, as represented by the 35x1 matrix, $g^*$.

$$g^* = [I - D'(I - \hat{u})B]^{-1} \cdot g^E$$

5. The $g^*$ matrix is multiplied by the wage and GDP ratios in Statistics Canada's I-O tables to derive estimates of the indirect impact labour income and GDP in each industry.

6. To estimate indirect impact employment (in terms of FTEs), indirect labour income is summed across all 35 industries ($i$ = 1 to 35) and divided by the average full-time salary in each province.

$$\text{FTEs} = (\sum \text{labour income}_i) \div \text{average full-time salary}$$

*Induced impact:*

The Type II and Type I economic multipliers published by Statistics Canada (catalogue no. 15F0046XDB) are used to deduce induced-impact ratios for each of the 35 industries in the I-O tables. These ratios are applied to the estimates of direct and indirect labour income generated by the model to arrive at an estimate of the increase in induced impact output in each of the 35 industries. The wage and GDP ratios from the I-O tables are then used to convert these estimate of increased output into estimates of induced impact labour income and GDP. The average salary across all industries are then used to convert the estimate of induced impact labour income into an estimate of induced impact FTEs.

**** End of document